After all appropriate surface and subsurface testing was completed, an additional survey was made of standing structures and potential historic site locations indicated in the original report (Custer et al. 1984: Attachments II and III). The object of the additional visiting of structures was to see if any of the recorded standing structures had been destroyed since their recording and to ascertain if any historical archaeological resources might be associated with these standing structures. Similarly, potential historical archaeological site locations, which were noted in the original planning study on the basis of analyses of Beers' and Baist's atlases, were visited to see if ruins or other indications of possible historical archaeological sites were present. Field methods for this portion of the study consisted of augering, probing, checking for surface indications of modern disturbance, and simple surface inspection of the terrain looking for artifacts and ruins or foundations.

All sites found during the surface and subsurface phases of the investigation were given State of Delaware Cultural Resource Survey (CRS) numbers and archaeological site numbers and Delaware archaeological survey site forms were completed and filed with the Delaware Bureau of Archaeology and Historic Preservation (BAHP) in Dover. Additionally, Delmarva Archaeological Data System (DADS) forms were completed for all prehistoric sites found so that they could be recorded in the DADS computerized data bank. All artifacts recovered were washed and marked with Island Field Museum accession numbers in accordance with BAHP policies and guidelines on artifact processing and curation.

RESULTS

GENERAL SURVEY RESULTS

The presentation of the results of the survey will be divided into two parts. First the results of the general surface and subsurface testing will be noted. Second, results of the specific survey of standing structures and other potential historical archaeological sites will be presented. Three large private collections (one each from Areas 6, 10, and 12) were also catalogued as part of the survey and are presented as Appendices II, III, and IV.

The results of the general survey will be presented for Kent County Study Areas 3 through 10 and 12 (Figure 4). See Custer and Bachman 1986 for a report on the New Castle County study areas 1, 2, and 11. Maps of site locations, tables of locational data, tables of cultural historical data, and summary discussions of some of the more interesting sites will be presented. Appendix V provides a detailed description of the site attributes recorded and listed in the summary tables. Study areas are discussed in order from north to south.

Area 12 - Smyrna Study Area - Surface Survey

Figure 24 shows the archaeological sites recorded and the subareas noted in the Smyrna area. Locational attributes of the sites are listed in Table 2 and cultural historical data in Table 3. The Smyrna Study Area includes segments of the Duck Creek (also known as Smyrna River) and Mill Creek drainages and their minor tributaries. It is bounded on the west by existing U.S. 13 and extends eastward for about five kilometers. The study area measures approximately 4.5 km north to south. Modern land use is almost exclusively agricultural, with isolated single family houses situated along the road frontage. Exceptions to the above pattern are the cluster of dwellings known as Smyrna Landing, 1.2 km east of U.S. 13, and Smyrna Airport, off Del. 6, 1.6 km to the east. The topography of the area is gently rolling, with the fields frequently dissected by numerous ephemeral and perennial streams. Bay/basin features are common in the area, although they are not as frequent as they are in nearby areas to the north. Archaeological investigation of the area (all pedestrian survey) was conducted between January and April, 1985, and ground surface visibility was generally poor during this period. For management purposes, the study area was divided into five subareas and each will be discussed separately below.

Subarea 12-1 This subarea lies north-northeast of Smyrna and includes the north bank of a portion of Duck Creek. It is composed of four farms owned by Rheim, Jurgens, Ross, and Daniels and is about 80% no-till corn and soybeans. Despite the visibility handicap, 26 sites (7NC-J-118 through 143) were recorded. However, only two of these produced diagnostic artifacts. Site 7NC-J-121 contained a Woodland I black chert stemmed point (Plate 1), one large non-diagnostic argillite biface, several early stage biface rejects, utilized flakes, and associated debitage on a terrace at a point formed by a bend in Duck Creek, while J-122 produced a black chert stemmed point (Plate 1) and flakes on a rise well back from the Duck Creek floodplain. All of the remaining sites yielded small amounts of flakes, fire-cracked rock (hereafter referred to as "FCR"), and a scraper or ground stone tool and were usually found on rises along ephemeral tributaries to Duck Creek.

Subarea 12-2 This subarea contains another segment of the north side of Duck Creek, downstream from Subarea 1, and includes, in whole or part, the Shane, Tush, Fox, and David farms. Recorded were a total of 20 sites, designated 7NC-J-143 through 162, and eight of these produced diagnostic artifacts. Six produced Woodland I stemmed and notched points and debitage (7NC-J-145, 147, 151, 154, 158, and 162) (Plates 2, 3, and 4), J-157 one contained Woodland I stemmed points, fishtails, broadpoints and Woodland II Killens Ware sherds (Plate 1), and one yielded an Archaic Period jasper bifurcate point and debitage (J-149) (Plate 5). Sites J-151, 157, and 162 are viewed as macro-band base camps; J-143, 146-150, 155, and 158 as micro-band base camps; and the remaining sites in this subarea are thought to be procurement sites.

FIGURE 24

Sites and Subareas – Smyrna Study Area 12

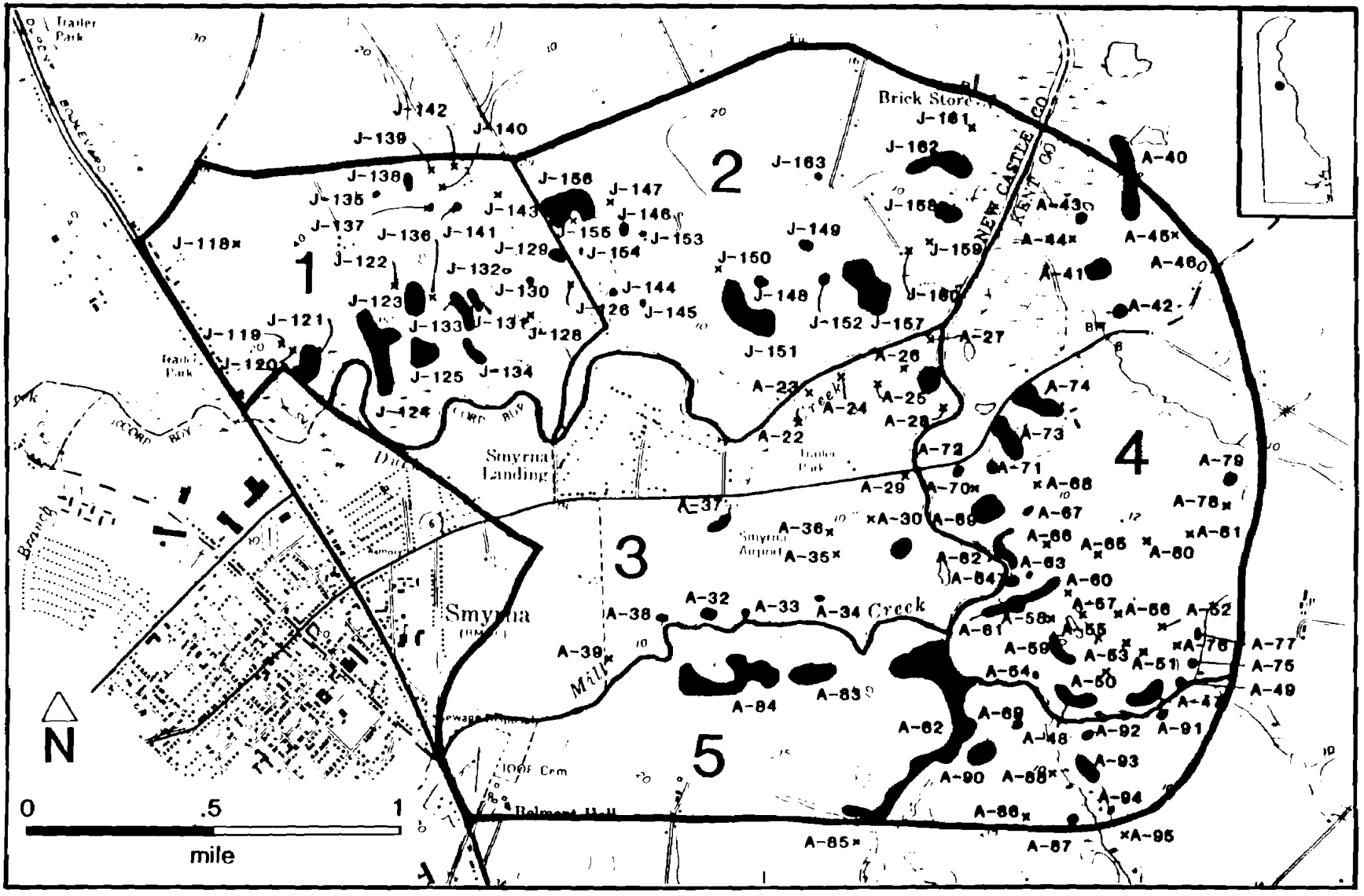


TABLE [illegible]

LOCATIONAL DATA - PREHISTORIC RESOURCES - SMYRNA STUDY AREA

SITE NUMBER	REF. NUMBER	USGS QUAD	UTM NORTH	UTM EAST	GEOMORPHOLOGICAL SETTING	PRIMARY SOIL SERIES	SECONDARY SOIL SERIES	DRAINAGE	SURFACE WATER SETTING	CONF.	WATER DISTANCE (METERS)	SLOPE	ASPECT	ELEVATION
7NC-J-118	N10607	SMYRNA	302	53	RISE	SaB2	MaA	DUCK CREEK	STREAM	N	1	2	W	40
7NC-J-119	N10608	SMYRNA	283	62	RISE	SaB2		DUCK CREEK	STREAM	N	4	2	S	20
7NC-J-120	N10609	SMYRNA	282	64	RISE	SaB2		DUCK CREEK	STREAM	N	4	2	S	20
7NC-J-121	N10610	SMYRNA	288	66	TERRACE	SaB2		DUCK CREEK	STREAM	N	1	2	S	20
7NC-J-122	N10611	SMYRNA	291	81	TERRACE	SaB2		DUCK CREEK	STREAM	N	0	2		30
7NC-J-123	N10612	SMYRNA	292	84	TERRACE	MtA		DUCK CREEK	STREAM	N	6	2	E	30
7NC-J-124	N10613	SMYRNA	282	78	TERRACE	SaB2		DUCK CREEK	STREAM	N	0	2	S	10
7NC-J-125	N10614	SMYRNA	282	86	TERRACE	SaB2		DUCK CREEK	STREAM	N	4	2	S	20
7NC-J-126	N10615	SMYRNA	295	113	RISE	MaB2		DUCK CREEK	STREAM	N	6	2	W	20
7NC-J-127	N10616	SMYRNA	301	110	TERRACE	KeB2		DUCK CREEK	STREAM	N	5	2	W	25
7NC-J-128	N10617	SMYRNA	289	106	RISE	SaB2		DUCK CREEK	STREAM	Y	1	2	SE	20
7NC-J-129	N10618	SMYRNA	302	109	TERRACE	EkA	SaB2	DUCK CREEK	STREAM	O	5	0		25
7NC-J-130	N10619	SMYRNA	296	105	TERRACE	MaB2	SaB2	DUCK CREEK	STREAM	N	2	2	E	20
7NC-J-131	N10620	SMYRNA	291	96	TERRACE	SaB2		DUCK CREEK	STREAM	N	0	2	W	20
7NC-J-132	N10621	SMYRNA	298	101	TERRACE	MaB2		DUCK CREEK	STREAM	N	6	2	E	35
7NC-J-133	N10622	SMYRNA	291	92	TERRACE	SaB2		DUCK CREEK	STREAM	N	0	2	E	20
7NC-J-134	N10623	SMYRNA	292	95	RISE	SaB2		DUCK CREEK	STREAM	N	0	2	S	10
7NC-J-135	N10624	SMYRNA	311	78	RISE	SaB2		DUCK CREEK	STREAM	N	2	2	W	40
7NC-J-136	N10625	SMYRNA	295	82	TERRACE	SaB2		DUCK CREEK	STREAM	N	5	2		25
7NC-J-137	N10626	SMYRNA	308	82	RISE	Wo		DUCK CREEK	STREAM	N	1	0	E	35
7NC-J-139	N10628	SMYRNA	316	88	TERRACE	SaB2		DUCK CREEK	STREAM	N	5	2	N	35
7NC-J-140	N10629	SMYRNA	313	90	RISE	SaB2		DUCK CREEK	STREAM	N	4	2		35
7NC-J-141	N10630	SMYRNA	308	92	RISE	SaB2		DUCK CREEK	STREAM	N	1	2	W	35
7NC-J-142	N10631	SMYRNA	316	93	RISE	SaB2		DUCK CREEK	STREAM	N	5	2	N	30
7NC-J-143	N10632	SMYRNA	310	100	RISE	MtA		DUCK CREEK	STREAM	N	13	0	N	20
7NC-J-144	N10633	SMYRNA	294	130	TERRACE	MaC3		DUCK CREEK	STREAM	N	1	5	E	15
7NC-J-145	N10634	SMYRNA	292	126	RISE	MtA		DUCK CREEK	STREAM	Y	2	0	SW	25
7NC-J-146	N10635	SMYRNA	290	121	RISE	MtB2	MaC3	DUCK CREEK	STREAM	Y	2	2	NW	15
7NC-J-147	N10636	SMYRNA	311	119	TERRACE	MaB2		DUCK CREEK	STREAM	N	1	2	N	20
7NC-J-148	N10637	SMYRNA	292	116	RISE	MaB2		DUCK CREEK	STREAM	N	6	2		25
7NC-J-149	N10638	SMYRNA	301	154	RISE	MaB2		DUCK CREEK	STREAM	N	0	2	E	18
7NC-J-150	N10639	SMYRNA	299	138	RISE	MtB2		DUCK CREEK	STREAM	N	2	2	SW	13
7NC-J-151	N10640	SMYRNA	290	145	RISE	MaC3	MaB2	DUCK CREEK	STREAM	Y	0	5	SW	10
7NC-J-152	N10641	SMYRNA	297	157	TERRACE	SaB2	SaB2	DUCK CREEK	STREAM	N	0	2	S	10
7NC-J-153	N10642	SMYRNA	305	126	TERRACE	MaA		DUCK CREEK	STREAM	N	7	0		20
7NC-J-154	N10643	SMYRNA	302	115	RISE	KeB2		DUCK CREEK	STREAM	Y	1	2	E	20
7NC-J-155	N10644	SMYRNA	308	113	RISE	MtA		DUCK CREEK	STREAM	Y	2	0	SE	20
7NC-J-156	N10645	SMYRNA	310	112	TERRACE	MtA	EkA	DUCK CREEK	STREAM	O	0	0		20
7NC-J-157	N10646	SMYRNA	292	166	TERRACE	SaB2	SaB2	DUCK CREEK	STREAM	N	0	2	S	8
7NC-J-158	N10647	SMYRNA	310	138	TERRACE	SaB2		DUCK CREEK	STREAM	Y	2	2	NE	10
7NC-J-159	N10648	SMYRNA	305	126	RISE	SaB2		DUCK CREEK	STREAM	N	5	2	E	13
7NC-J-160	N10649	SMYRNA	303	122	TERRACE	SaB2		DUCK CREEK	STREAM	N	4	2	S	10
7NC-J-161	N10650	SMYRNA	295	128	RISE	SaB2		DUCK CREEK	STREAM	N	4	2		10
7NC-J-162	N10651	SMYRNA	318	128	TERRACE	SaB2		DUCK CREEK	STREAM	Y	0	2	S	10
7NC-J-163	N10652	SMYRNA	311	156	TERRACE	SaB2		DUCK CREEK	STREAM	Y	1	2	S	10
7K-[illegible]-24	K-6255	SMYRNA	272	154	TERRACE	SaB		DUCK CREEK	STREAM	N	0	2	S	10
7K-[illegible]-25	K-6256	SMYRNA	276	154	TERRACE	SaB		DUCK CREEK	STREAM	N	0	2	NW	8

TABLE 2 (cont.)

LOCATIONAL DATA - PREHISTORIC RESOURCES - SMYRNA STUDY AREA

SITE NUMBER	CRS NUMBER	USGS QUAD	UTM NORTH	UTM EAST	GEOMORPHOLOGICAL SETTING	PRIMARY SOIL SERIES	SECONDARY SOIL SERIES	DRAINAGE	SURFACE WATER SETTING	CONF.	WATER DISTANCE (METERS)	SLOPE	ASPECT	ELEVATION
7K-A-24	K-6237	SMYRNA	200	160	TERRACE	SaA		DUCK CREEK	STREAM	N	0	0	N	8
7K-A-25	K-6238	SMYRNA	220	162	TERRACE	SaA		DUCK CREEK	STREAM	N	0	0	N	8
7K-A-26	K-6239	SMYRNA	200	172	TERRACE	SaA		DUCK CREEK	STREAM	N	0	0	W	6
7K-A-27	K-6240	SMYRNA	206	176	TERRACE	SaA		DUCK CREEK	STREAM	Y	0	0	N	5
7K-A-28	K-6241	SMYRNA	225	179	TERRACE	SaB		DUCK CREEK	STREAM	N	0	2	E	5
7K-A-29	K-6242	SMYRNA	262	174	TERRACE	SaB		DUCK CREEK	STREAM	N	1	5	E	10
7K-A-30	K-6243	SMYRNA	255	167	RISE	RoA		DUCK CREEK	STREAM	N	1	5	NW	10
7K-A-10	K-4000	SMYRNA	279	172	TERRACE	SaA		DUCK CREEK	STREAM	N	0	0	E	5
7K-A-11	K-4001	SMYRNA	219	171	TERRACE	SaA		DUCK CREEK	STREAM	Y	5	0	SE	10
7K-A-31	K-6244	SMYRNA	270	162	TERRACE	SaA		DUCK CREEK	STREAM	Y	0	2		10
7K-A-32	K-6245	SMYRNA	229	138	RISE	SaB		DUCK CREEK	STREAM	Y	0	2	S	10
7K-A-33	K-6246	SMYRNA	238	115	RISE	SaB		DUCK CREEK	STREAM	N	0	2	S	10
7K-A-34	K-6247	SMYRNA	242	152	RISE	SaA		DUCK CREEK	STREAM	N	7	0	S	10
7K-A-35	K-6248	SMYRNA	249	162	TERRACE	SaA		DUCK CREEK	STREAM	N	7	0		15
7K-A-36	K-6249	SMYRNA	252	161	TERRACE	SaA		DUCK CREEK	STREAM	N	3	0	N	15
7K-A-37	K-6250	SMYRNA	251	140	RISE	Wo		DUCK CREEK	STREAM	N	0	0		10
7K-A-38	K-6251	SMYRNA	234	131	RISE	SaB		DUCK CREEK	STREAM	N	0	2	S	10
7K-A-39	K-6252	SMYRNA	232	132	TERRACE	SaB		DUCK CREEK	STREAM	N	0	2	S	10
7K-A-41	K-6254	SMYRNA	291	210	RI?EACE	MeA		DUCK CREEK	STREAM	N	2	0	W	5
7K-A-42	K-6255	SMYRNA	294	210	TERRACE	MeB		DUCK CREEK	STREAM	Y	0	2	SE	4
7K-A-43	K-6256	SMYRNA	311	202	RISE	SaB		DUCK CREEK	STREAM	N	1	2	W	3
7K-A-44	K-6257	SMYRNA	303	200	TERRACE	SaB		DUCK CREEK	STREAM	N	1	2	W	3
7K-A-45	K-6258	SMYRNA	303	220	TERRACE	SaA		DUCK CREEK	STREAM	N	12	0	S	12
7K-A-46	K-6259	SMYRNA	302	225	TERRACE	SaA		DUCK CREEK	STREAM	N	5	2	S	12
7K-A-47	K-6260	SMYRNA	256	216	RISE	SaB	KeA	DUCK CREEK	STREAM	Y	0	2	S	9
7K-A-48	K-6261	SMYRNA	226	213	TERRACE	SaC		DUCK CREEK	STREAM	Y	0	5	S	9
7K-A-49	K-6262	SMYRNA	253	222	TERRACE	SaC		DUCK CREEK	STREAM	Y	1	5	S	7
7K-A-50	K-6263	SMYRNA	230	209	RISE	SaB		DUCK CREEK	STREAM	N	5	2	E	10
7K-A-51	K-6264	SMYRNA	271	216	RISE	SaC		DUCK CREEK	STREAM	N	2	5	SW	10
7K-A-52	K-6265	SMYRNA	238	219	RISE	SaB		DUCK CREEK	STREAM	N	3	2		13
7K-A-53	K-6266	SMYRNA	236	213	TERRACE	SaC		DUCK CREEK	STREAM	N	2	5	S	10
7K-A-54	K-6267	SMYRNA	230	198	TERRACE	SaB		DUCK CREEK	STREAM	N	0	2	SW	7
7K-A-55	K-6268	SMYRNA	236	208	RISE	SaC		DUCK CREEK	STREAM	N	1	5	SW	15
7K-A-56	K-6269	SMYRNA	241	211	RISE	SaB		DUCK CREEK	STREAM	N	2	0		15
7K-A-57	K-6270	SMYRNA	240	206	RISE	SaC		DUCK CREEK	STREAM	N	1	5	SW	15
7K-A-58	K-6271	SMYRNA	230	200	RISE	SaC		DUCK CREEK	STREAM	N	1	5	E	14
7K-A-59	K-6272	SMYRNA	234	201	RISE	SaC	SaB	DUCK CREEK	STREAM	N	0	5	NE	13
7K-A-60	K-6273	SMYRNA	244	202	TERRACE	SaB		DUCK CREEK	STREAM	N	2	2	S	12
7K-A-61	K-6274	SMYRNA	242	195	TERRACE	SaB		DUCK CREEK	STREAM	Y	0	2	N	7
7K-A-62	K-6275	SMYRNA	251	191	TERRACE	SaB		DUCK CREEK	STREAM	Y	0	2	W	6
7K-A-63	K-6276	SMYRNA	248	194	RISE	SaB		DUCK CREEK	STREAM	N	2	0	W	7
7K-A-64	K-6277	SMYRNA	246	192	TERRACE	SaB		DUCK CREEK	STREAM	Y	0	2	W	5
7K-A-65	K-6278	SMYRNA	251	207	RISE	SaB		DUCK CREEK	STREAM	N	7	2	W	12
7K-A-66	K-6279	SMYRNA	253	190	RISE	SaB		DUCK CREEK	STREAM	N	2	0	SE	11
7K-A-67	K-6280	SMYRNA	259	195	TERRACE	SaB		DUCK CREEK	STREAM	N	0	2	NW	8
7K-A-68	K-6281	SMYRNA	261	197	TERRACE	SaB		DUCK CREEK	STREAM	N	1	2	SW	8
7K-A-69	K-6282	SMYRNA	260	183	TERRACE	SaB	SaB	DUCK CREEK	STREAM	Y	0	2	S	6

TABLE 2 (cont.)

LOCATIONAL DATA - PREHISTORIC RESOURCES - SYMRNA STUDY AREA

SITE NUMBER	PRS NUMBER	USGS QUAD	UTM NORTH	UTM EAST	GEOMORPHOLOGICAL SETTING	PRIMARY SOIL SERIES	SECONDARY SOIL SERIES	DRAINAGE	SURFACE WATER SETTING	CONF.	WATER DISTANCE (METERS)	SLOPE	ASPECT	ELEVATION
[illegible]	[illegible]	SMYRNA	264	186	TERRACE	[illegible]		DUCK CREEK	STREAM	N	2	2	W	5
[illegible]	[illegible]	SMYRNA	266	108	TERRACE	[illegible]		DUCK CREEK	STREAM	N	3	0	W	5
[illegible]	[illegible]	SMYRNA	265	102	TERRACE	[illegible]		DUCK CREEK	STREAM	N	0	2	W	3
[illegible]	[illegible]	SMYRNA	272	190	TERRACE	[illegible]	[illegible]	DUCK CREEK	STREAM	Y	0	0	N	4
[illegible]	[illegible]	SMYRNA	277	196	TERRACE	[illegible]	[illegible]	DUCK CREEK	STREAM	Y	0	0	N	4
[illegible]	[illegible]	SMYRNA	282	224	TERRACE	[illegible]		DUCK CREEK	STREAM	Y	1	5	S	10
[illegible]	[illegible]	SMYRNA	235	223	TERRACE	[illegible]		DUCK CREEK	STREAM	N	1	0	S	5
[illegible]	[illegible]	SMYRNA	256	225	TERRACE	[illegible]		DUCK CREEK	STREAM	N	1	0	E	10
[illegible]	[illegible]	SMYRNA	260	230	TERRACE	[illegible]		DUCK CREEK	STREAM	Y	1	2	NE	10
[illegible]	[illegible]	SMYRNA	264	231	RISE	[illegible]		DUCK CREEK	STREAM	Y	0	2	I	10
[illegible]	[illegible]	SMYRNA	254	216	TERRACE	[illegible]		DUCK CREEK	STREAM	N	16	0		10
[illegible]	[illegible]	SMYRNA	295	213	TERRACE	[illegible]		DUCK CREEK	STREAM	N	11	0		10
[illegible]	[illegible]	SMYRNA	297	181	TERRACE	[illegible]	[illegible]	DUCK CREEK	STREAM	Y	0	0	E	10
[illegible]	[illegible]	SMYRNA	280	156	TERRACE	[illegible]		DUCK CREEK	STREAM	Y	0	5	N	10
[illegible]	[illegible]	SMYRNA	282	134	TERRACE	[illegible]		DUCK CREEK	STREAM	Y	0	2	N	10
[illegible]	[illegible]	SMYRNA	301	166	TERRACE	[illegible]		DUCK CREEK	STREAM	Y	2	0	NE	12
[illegible]	[illegible]	SMYRNA	304	204	TERRACE	[illegible]		DUCK CREEK	STREAM	Y	1	2	E	10
[illegible]	[illegible]	SMYRNA	311	201	TERRACE	[illegible]		DUCK CREEK	STREAM	N	1	2	E	8
[illegible]	[illegible]	SMYRNA	320	195	TERRACE	[illegible]		DUCK CREEK	STREAM	Y	1	2	NE	6
[illegible]	[illegible]	SMYRNA	316	186	TERRACE	[illegible]		DUCK CREEK	STREAM	N	0	2	NW	10
[illegible]	[illegible]	SMYRNA	322	209	TERRACE	[illegible]		DUCK CREEK	STREAM	N	0	2	N	12
[illegible]	[illegible]	SMYRNA	319	206	TERRACE	[illegible]		DUCK CREEK	STREAM	Y	0	2	NW	10
[illegible]	[illegible]	SMYRNA	313	202	TERRACE	[illegible]		DUCK CREEK	STREAM	Y	1	5	NW	10
[illegible]	[illegible]	SMYRNA	306	211	TERRACE	[illegible]		DUCK CREEK	STREAM	N	1	2	W	8
[illegible]	[illegible]	SMYRNA	303	214	TERRACE	[illegible]		DUCK CREEK	STREAM	N	1	2	W	12
[illegible]	[illegible]	LITTLE C	119	179	TERRACE	[illegible]		LITTLE CREEK	STREAM	Y	3	2	W	10

TABLE 5

CULTURAL - HISTORICAL DATA - [illegible] STUDY AREA

SITE NUMBER	PALEO	ARCHAIC	WOODLAND I	WOODLAND II	CE	BE	WN	CA	RG	DO	HP	SC	MG	HISTORIC	BIFACE	SCRAPER	FLAKE TOOL	CORE	FLAKES	GROUND STONE	FCR	CERAMICS
2MD-J-119																Y						
2MD-J-120																			Y			
2MD-J-121			Y												Y		Y		Y		Y	
2MD-J-122			Y												Y				Y			
2MD-J-123																		Y	Y			
2MD-J-124															Y				Y	Y	Y	
2MD-J-125				Y									Y		Y				Y		Y	Y
2MD-J-126															Y						Y	
2MD-J-127																	Y					
2MD-J-128																	Y		Y			
2MD-J-129														Y								
2MD-J-130																	Y					
2MD-J-131																		Y	Y		Y	
2MD-J-132															Y				Y			
2MD-J-133															Y	Y	Y	Y	Y		Y	
2MD-J-134															Y		Y		Y	Y	Y	
2MD-J-135															Y				Y		Y	
2MD-J-136																			Y			
2MD-J-137															Y				Y			
2MD-J-138																	Y	Y				
2MD-J-139															Y							
2MD-J-140																Y			Y			
2MD-J-141															Y		Y					
2MD-J-142															Y			Y				
2MD-J-143																				Y		
2MD-J-144																			Y		Y	
2MD-J-145			Y												Y						Y	
2MD-J-146															Y		Y		Y	Y	Y	
2MD-J-147			Y			Y									Y						Y	
2MD-J-148																Y			Y		Y	
2MD-J-149		Y													Y				Y		Y	
2MD-J-150																		Y				
2MD-J-151			Y												Y		Y		Y		Y	
2MD-J-152																			Y		Y	
2MD-J-153														Y								
2MD-J-154			Y			Y									Y				Y		Y	
2MD-J-155																				Y		
2MD-J-156														Y								
2MD-J-157			Y	Y		Y		Y					Y		Y				Y		Y	Y
2MD-J-158			Y												Y				Y		Y	
2MD-J-159															Y							
2MD-J-160			Y												Y							
2MD-J-161															Y							
2MD-J-162															Y		Y		Y		Y	Y
2MD-J-163																			Y		Y	
2FH-[illegible]															Y							
2FH-[illegible]			Y												Y							
2FH-213			Y												Y							
2FH-[illegible]			Y					Y							Y							
2FH-[illegible]			Y	Y		Y	Y	Y	Y			Y	Y		Y				Y	Y		Y

TABLE 3 (cont.)

CULTURAL - HISTORICAL DATA - SAYENA STUDY AREA

SITE NUMBER	PALEO	ARCHAIC	WOODLAND I	WOODLAND II	CF	BL	WN	CA	WR	DH	DF	SI	MG	HISTORIC	BIFACE	SCRAPER	FLAKE TOOL	CORE	FLAKES	GROUND STONE TOOL	FCR	CERAMICS
28 H 27			Y	Y		Y	Y	Y	Y			Y	Y		Y	Y	Y			Y		Y
28 H 10			Y	Y		Y	Y	Y	Y			Y	Y							Y		Y
28 H 28			Y												Y				Y	Y		Y
28 H 29			Y					Y							Y							Y
28 H 30			Y												Y							
28 H 31		Y	Y																	Y		
28 H 11			Y					Y							Y	Y			Y			
28 H 32			Y					Y							Y				Y		Y	
28 H 33				Y								Y	Y						Y			Y
28 H 34																			Y		Y	
28 H 35															Y							
28 H 36			Y												Y							
28 H 37																	Y		Y			
28 H 38			Y			Y									Y				Y		Y	
28 H 39		Y													Y				Y		Y	
28 H 40															Y		Y		Y	Y	Y	Y
28 H 41															Y				Y		Y	
28 H 42																			Y			Y
28 H 43																			Y		Y	
28 H 44																			Y			
28 H 45																					Y	
28 H 46																					Y	
28 H 47				Y								Y			Y			Y	Y	Y	Y	Y
28 H 48																		Y	Y	Y		
28 H 49															Y						Y	
28 H 50															Y							
28 H 51		Y													Y							
28 H 52															Y							
28 H 53															Y							
28 H 54																		Y			Y	
28 H 55																Y						
28 H 56																				Y		
28 H 57																				Y		
28 H 58		Y																		Y		
28 H 59																					Y	
28 H 60															Y							
28 H 61			Y												Y		Y	Y	Y	Y	Y	
28 H 62				Y									Y	Y	Y		Y	Y	Y	Y	Y	
28 H 63																	Y	Y				
28 H 64			Y												Y		Y	Y	Y		Y	
28 H 65																	Y					
28 H 66																	Y					
28 H 67				Y									Y		Y		Y	Y	Y		Y	
28 H 68																					Y	
28 H 69		Y	Y												Y		Y		Y		Y	
28 H 20															Y							
28 H 21															Y			Y			Y	
28 H 22																	Y		Y		Y	
28 H 23			Y					Y							Y		Y	Y	Y		Y	
28 H 24			Y	Y								Y	Y		Y		Y	Y	Y	Y	Y	Y
28 H 25																			Y		Y	
28 H 26															Y			Y	Y			

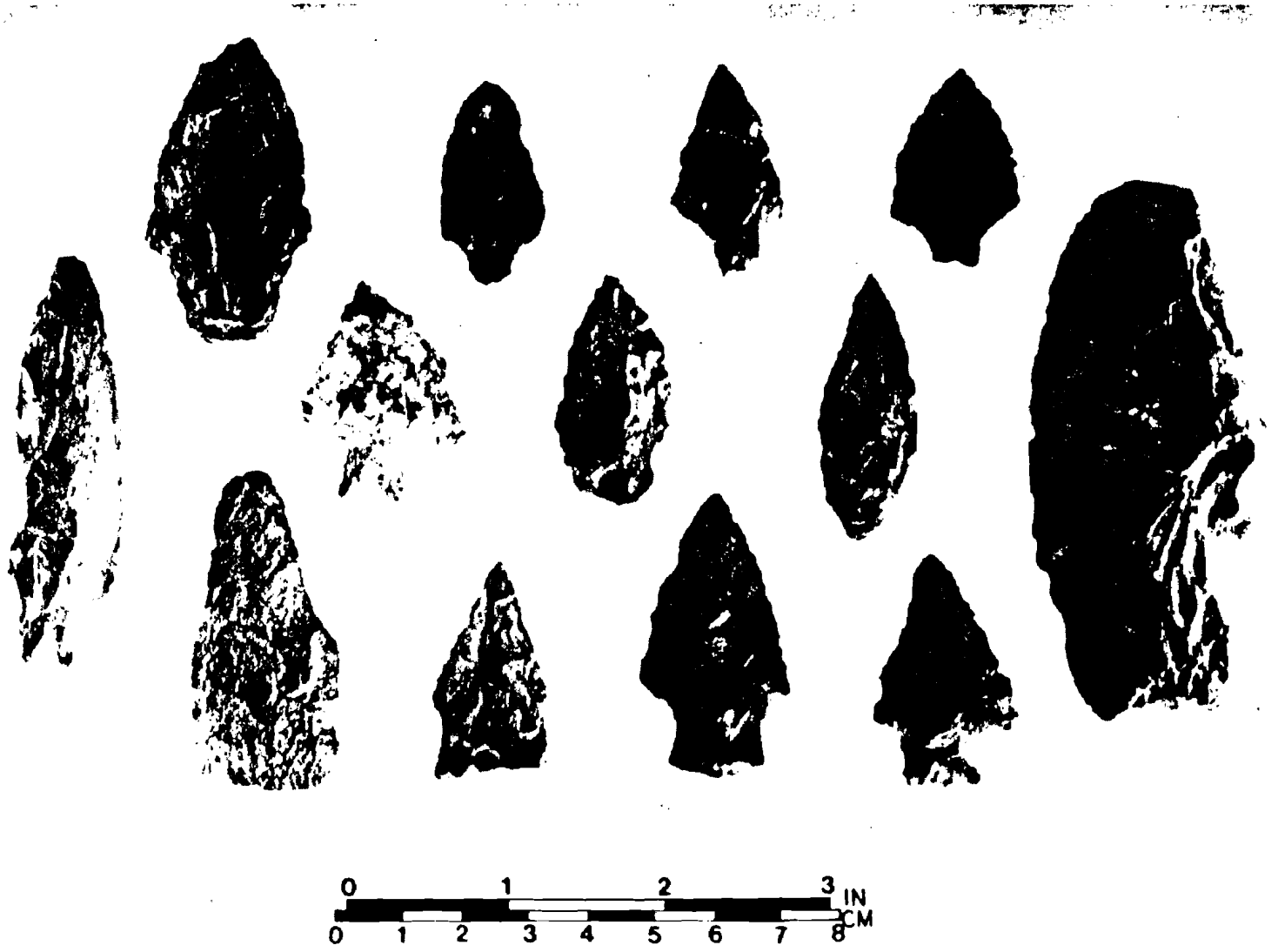
TABLE 3 (cont.)

[illegible] - HISTORICAL DATA - SMYRNA STUDY AREA

SITE NUMBER	PALEO	ARCHAIC	WOODLAND I	WOODLAND II	CF	BL	AN	CH	WG	UA	DP	SC	MG	HISTORIC	BIFACE	SCRAPER	FLAKE TOOL	CORE	FLAKES	GROUND STONE TOOL	FCR	CERAMICS
[illegible]																		Y	Y		Y	
[illegible]																	Y					
[illegible]															Y			Y				
[illegible]			Y			Y									Y							
[illegible]			Y			Y																
[illegible]				Y								Y	Y		Y		Y		Y		Y	Y
[illegible]																			Y		Y	
[illegible]																			Y		Y	
[illegible]																	Y		Y			
[illegible]															Y							
[illegible]			Y												Y				Y		Y	
[illegible]																			Y			
[illegible]																			Y		Y	
[illegible]															Y				Y		Y	
[illegible]																					Y	
[illegible]																			Y	Y		
[illegible]																			Y		Y	
[illegible]																					Y	
[illegible]				Y									Y						Y		Y	Y
[illegible]				Y									Y						Y		Y	Y
[illegible]				Y									Y						Y		Y	Y

PLATE 1

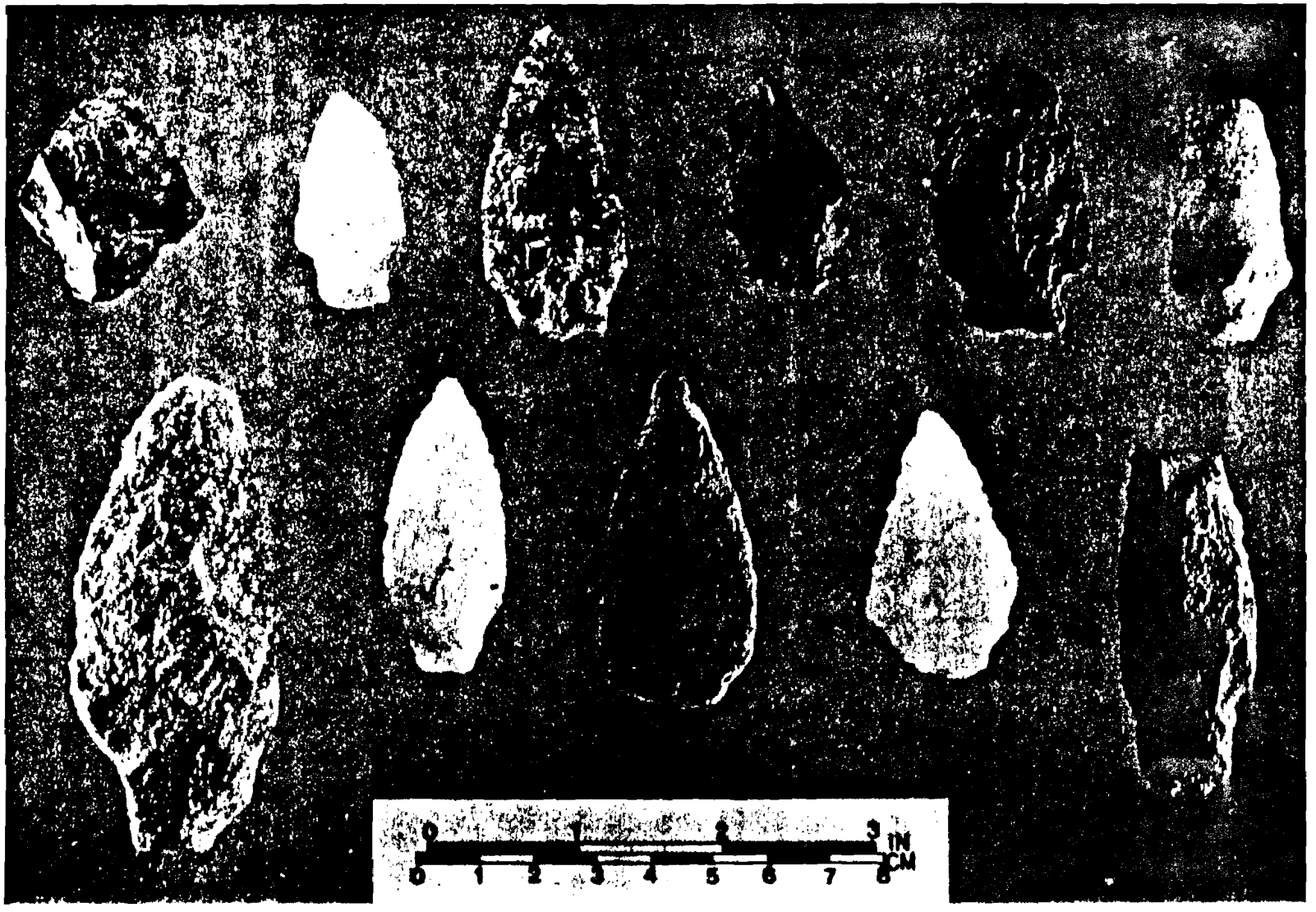
Selected Stemmed Points from Sites in the Route 13 South Survey



TOP ROW: left to right: 7K-C-124, 7NC-J-157, 7K-C-291, 7K-A-39; MIDDLE ROW, left to right: 7K-C-161, 7K-C-291, 7K-C-294, 7K-C-155; BOTTOM ROW, left to right: 7K-C-342, 7K-C-323, 7NC-J-122, 7NC-J-121, 7K-C-341

PLATE 2

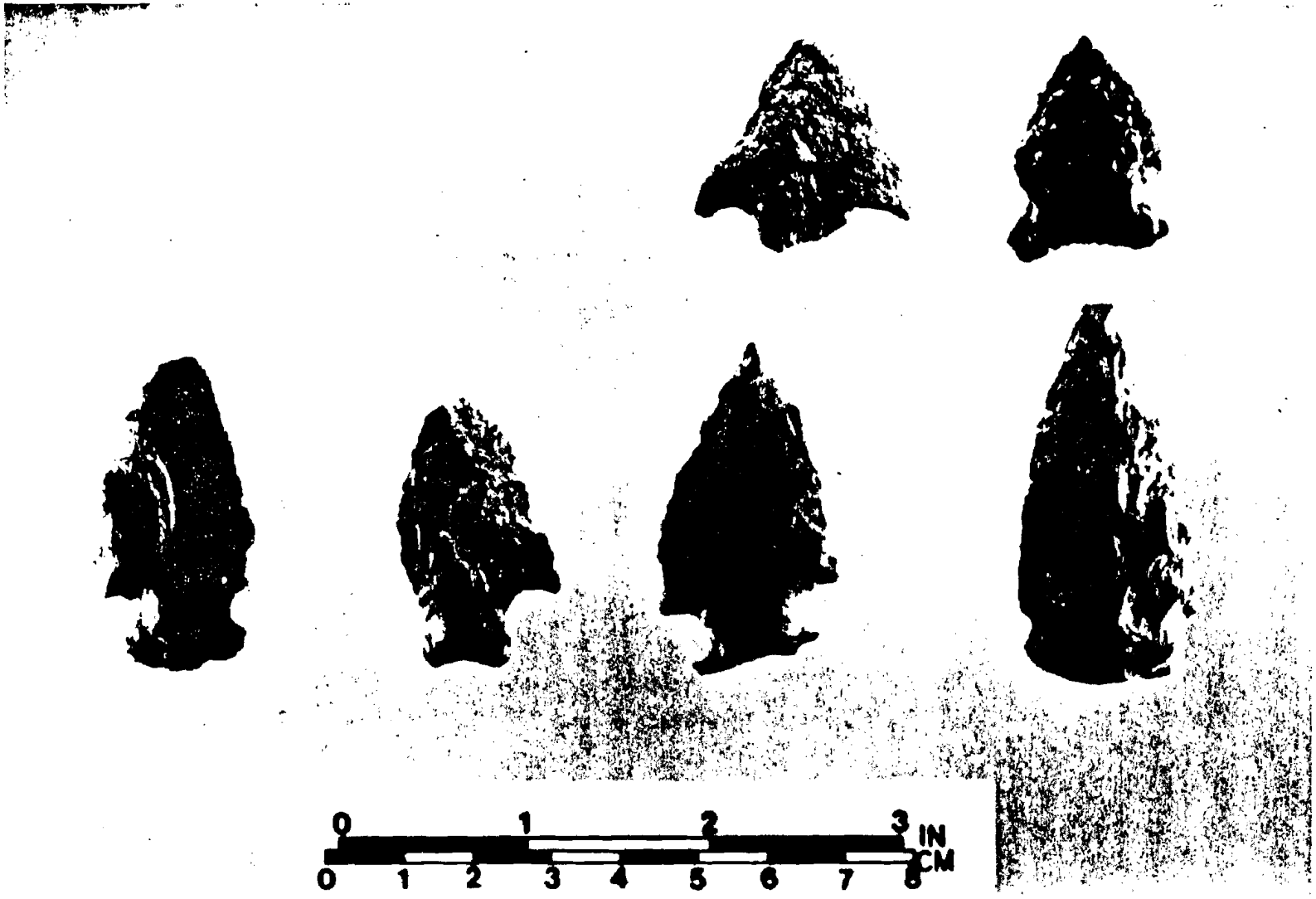
Selected Stemmed Points from Sites in the Route 13 South Survey



TOP ROW, left to right: 7K-C-339, 7K-C-264, 7K-D-107, 7K-D-107, 7NC-J-151; BOTTOM ROW, left to right: 7K-C-229, 7K-A-36, 7K-D-94, 7K-C-228, 7K-C-72

PLATE 3

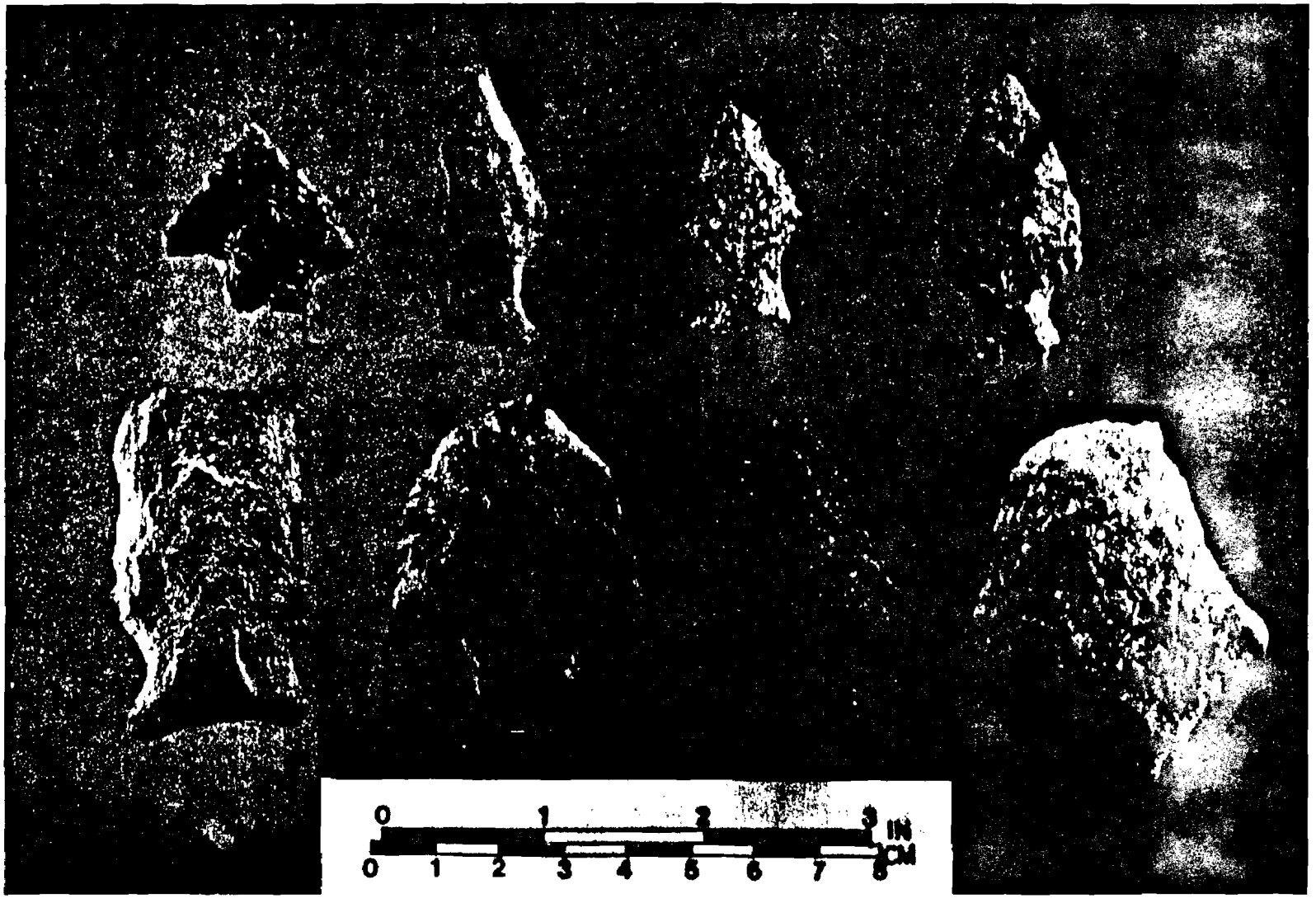
Selected Notched Points from Sites in the Route 13 South Survey



TOP ROW, left to right: 7K-C-330, 7K-D-34, 7K-C-249, 7NC-J-162; BOTTOM ROW, left to right: 7K-C-18, 7K-D-84, 7K-C-238, 7K-C-165

PLATE 4

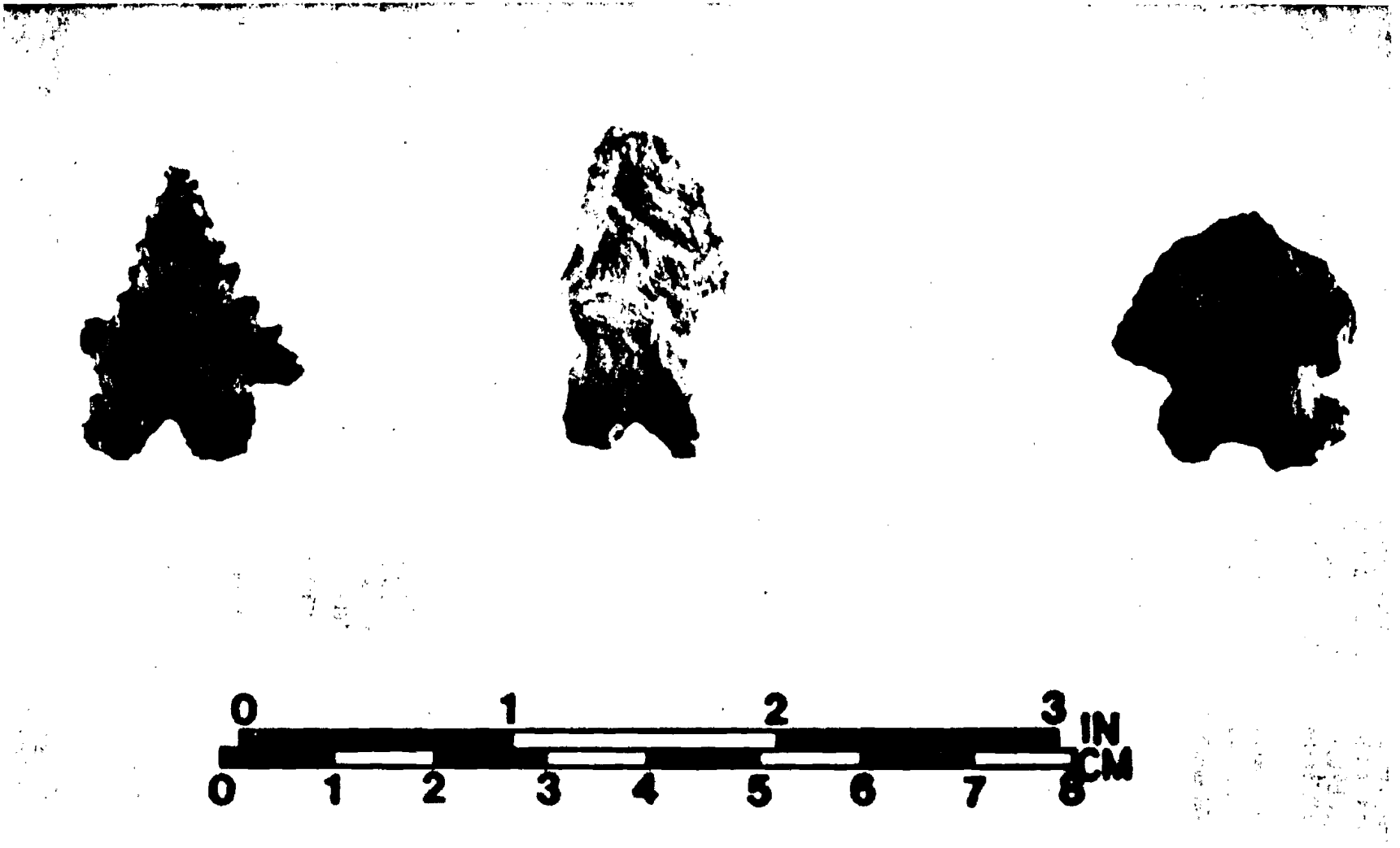
Selected Broadpoints and Fishtails from Sites in the Route 13 South Survey



TOP ROW, left to right: 7K-D-73, 7K-C-299, 7NC-J-147, 7K-A-38; BOTTOM ROW, left to right: 7K-C-257, 7K-C-72, 7NC-J-154, 7K-C-183

PLATE 5

Bifurcated Base Points from Sites in the Route 13 South Survey



LEFT TO RIGHT: 7K-C-305, 7NC-J-149, 7K-C-211

Subarea 12-3 Composed of all of the land bounded by Duck Creek on the north, Mill Creek on the south and east, and the Smyrna town limits on the west, this subarea contained some of the potentially most attractive settings in the entire study area. However, much of it had been developed by residential and commercial interests (Smyrna Landing, Smyrna Airport, and a trailer park) and a minority of the ground surface was available for pedestrian survey. Only one farm, the Reynolds Jones property surrounding Smyrna Airport, could be surface collected at the time of the survey. Two other properties, the James Bailey farm northeast and east of the airport, and the Philip Hall farm west of the airport, were all no-till corn and soybeans and offered no visible ground surface. The Jones farm produced 8 sites (7K-A-32 through 39), five of which contained one diagnostic artifact each. Site A-38 produced a jasper fishtail (Woodland I) (Plate 4), A-33 contained sherds of Minguannan and Townsend ceramics (Woodland II), and A-32, A-36 and A-39 produced Woodland I stemmed points (Plates 1 and 2). Small amounts of flakes and FCR were found at all of these sites as well, but due to low average visibility (10%), recovered artifact densities are probably low.

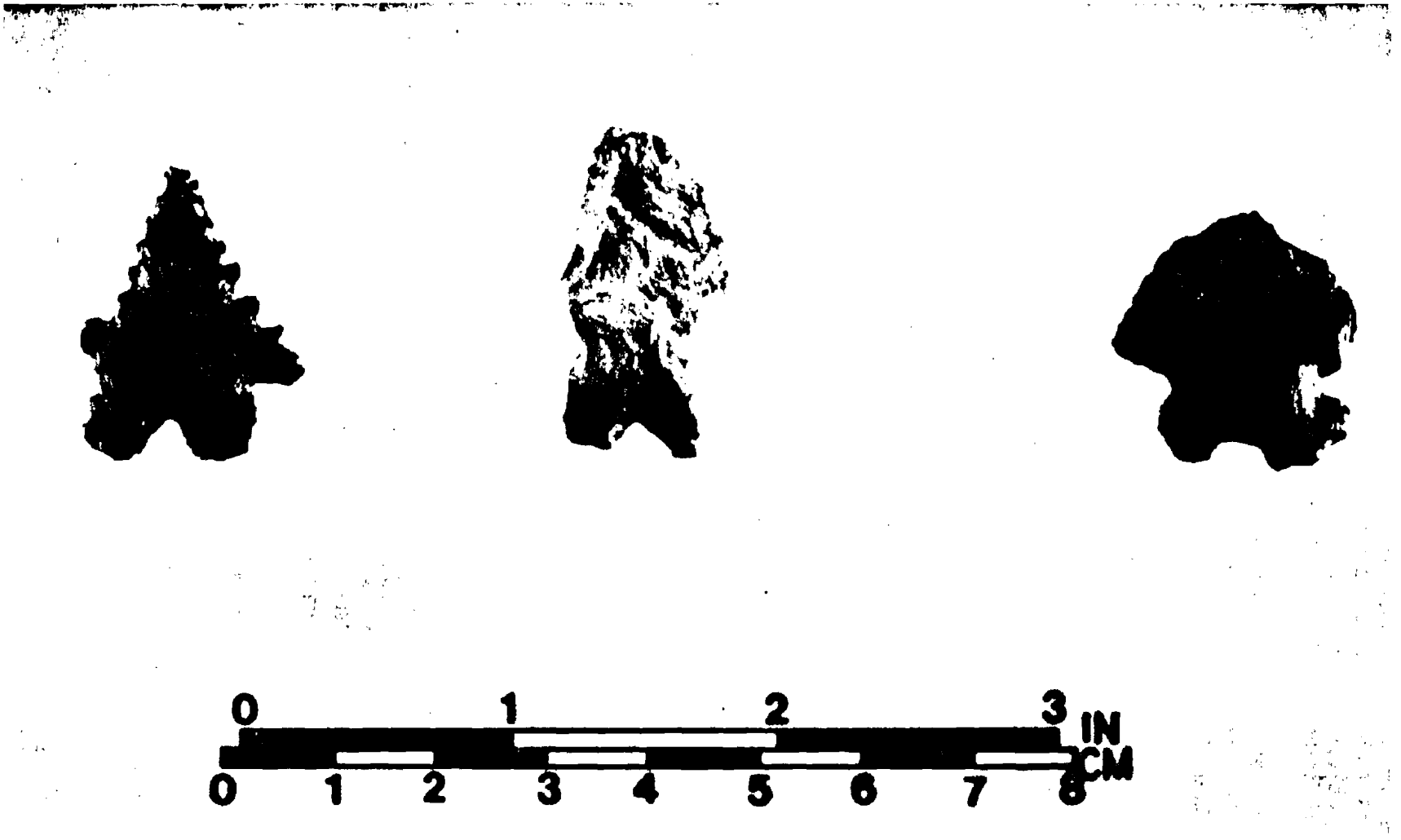
Mrs. James Bailey has gathered a large surface collection of prehistoric artifacts from her family's farm at the confluence of Duck and Mill Creeks and generously allowed UDCAR personnel to catalogue and photograph her collection. Artifacts from two previously recorded sites, 7K-A-10 and A-11, are included, in addition to 10 new sites, designated 7K-A-22 through 31. Materials from this collection are listed in detail in Appendix IV. Most of the sites on the Bailey Farm are either macro-band or micro-band base camps, while those on the Jones Farm appear to be base camps or procurement sites.

Subarea 12-4 Parts of two farms comprise the entire subarea: the James Schiff farm on the east side of Duck Creek and the Presley Moore farm southeast of the confluence of Duck and Mill Creeks. Topographic relief varies no more than one or two meters over the entire subarea and soils are generally well-drained Sassafras loams and sandy loams. Seven sites were recorded from Schiff's property and 35 from Moore's. Those on Schiff's farm (7K-A-40 through 46) were located on the low terraces along the stream banks and none produced diagnostic artifacts. Most are small sites with low amounts of artifacts; the exception is A-40, which yielded biface rejects, one small non-diagnostic grit-tempered sherd, several dozen FCR, and debitage in an area of 5% visibility. This appears to be a micro-band base camp, while the remaining sites are probably procurement stations.

The Moore farm produced sites on nearly every rise, stream confluence, and bay/basin setting encountered on the property and 13 had diagnostic artifacts. The 7K-A-47 site is located on a 3 meter rise between a bay/basin feature and an unnamed tributary to Mill Creek and contained Woodland I stemmed points, biface fragments (including the exotic rhyolite material), cores, a

PLATE 5

Bifurcated Base Points from Sites in the Route 13 South Survey



LEFT TO RIGHT: 7K-C-305, 7NC-J-149, 7K-C-211

pitted stone, a single Woodland II Townsend sherd, flakes and FCR. Just to the east of this site lies the A-49 site at the confluence of two minor tributaries to Mill Creek. One large argillite biface, similar to those found in reported Woodland I caches (e.g. Coverdale and Kiunk Ditch (Custer 1984:109-112)), and the nearby Bailey Farm (see Appendix IV, this report) and a cobble jasper early stage biface reject were the only artifacts recovered.

One Kirk corner-notched point of chert (Paleo-Indian Period) was recovered from the northeast side of a bay/basin feature with no other associated artifacts and was designated 7K-A-51. West of this site lies a pair of bay/basin features which had artifacts between them and around their rims. One Archaic Period full-grooved ax was recovered on the rim on the west side of the pair and the site was labeled 7K-A-58. Northwest of this site, at the confluence of Mill Creek and an unnamed tributary, is located a large Woodland I base camp designated 7K-A-61. Found here were 5 stemmed points of various materials, 13 non-diagnostic biface fragments, 15 flake tools and utilized flakes of mostly cobble material, 1 heavily reworked pebble jasper cleaver, 1 pecking stone, 1 hammerstone, 4 cores, 91 flakes, and 101 FCR in an area measuring about 1.7 hectares. More Woodland I points, plus other materials, were found on the north side of the same unnamed tributary, in a similar confluence setting (7K-A-64). Two hundred and fifty meters to the north of A-61, in a setting nearly identical to it, was another smaller but similar base camp (7K-A-62) which produced a Woodland II triangular point, non-diagnostic biface fragments (probably Woodland I), utilized flakes, a core, a pestle, and debitage. Upstream from A-62 was another small Woodland II site, A-67, which yielded a chert triangle and 14 other artifacts in an area measuring about 0.1 hectare. The base camp clustering continued on the north side of the unnamed tributary from A-62 and A-67, with another 2 hectare site which produced a Paleo-Indian Period Kirk stemmed point and Woodland I stemmed points, among other materials (7K-A-69).

Two large thin artifact scatters were located west of the Moore residences, southeast of the confluence of Mill and Duck Creeks, along the south side of Delaware 6. These sites, 7K-A-73 and 74, yielded Woodland I stemmed points and Woodland II triangles and ceramics (Townsend and Killens Ware), as well as a variety of other artifacts.

The final diagnostic artifacts to be found on the Moore Farm were two Woodland I Bare Island-like points found at separate locations on a low ridge dividing two drainages in the southeast corner of the property (7K-A-80 and 81). They probably represent points lost while hunting or butchering and are part of a string of scattered points, flake tools, and debitage extending along this ridge. Presently, it is an animal travel route, as deer and red fox were observed moving along it at various times during the survey. The artifact pattern suggests it may have been so for thousands of years.

The remaining 22 sites from the Moore Farm (7K-A-48, 50, 52-57, 59, 60, 63, 65, 66, 68, 70-72, and 75-79), occupy a variety of settings at varying distances from the major base camps. These are small sites, generally less than 0.2 hectare in size, and are thought to be related to the base camps. Artifacts recovered from these sites included small amounts of flakes, or a flake tool, a core, or a cluster of perhaps only 10 or 15 FCR, representing plowed-out single occupation hearths.

Subarea 12-5 Comprising the south bank of Mill Creek and an unnamed tributary, this large subarea lies directly south of Subareas 12-3 and 12-4. Few sites were found, although the generally poor surface visibility (average less than 5%) may have contributed to this and it is felt that both the quantity of sites and numbers of artifacts per site are under-represented in the survey results. Portions of three farms, belonging to Pratt, Rothwell, and Irwin, were surveyed and each produced one site with diagnostic artifacts and four sites without.

Site 7K-A-82, located on the Pratt Farm at the confluence of Mill Creek and an unnamed tributary, is a long scatter of artifacts stretching along the stream banks for about 1300 meters. Surface visibility was principally confined to the farm lane at the edge of the field and the eroding stream banks and consequently the true limits of the site are unknown. Nevertheless, several early stage or non-diagnostic bifaces, 1 Townsend sherd, 8 Minguannan sherds, innumerable flakes, and FCR were observed. Many of the flakes were very small pressure chips, indicating tool maintenance activities.

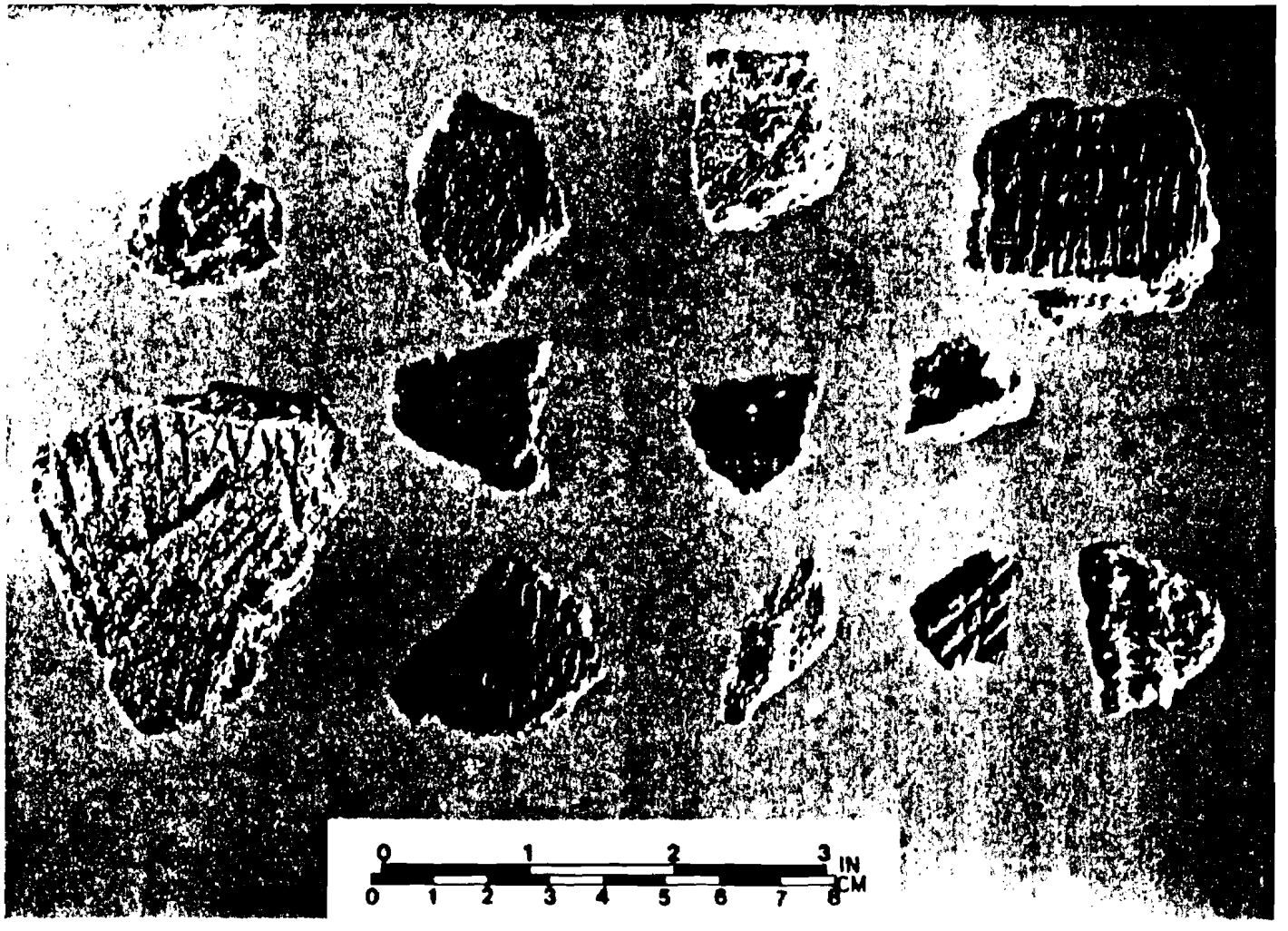
The other sites on the farm (7K-A-83, 84, and 85) are along the south side of Mill Creek, upstream from the A-82 site, and yielded many flakes and FCR, but no diagnostic artifacts. The middle section of the Pratt fields, which included ephemeral streams and several dry bay/basin features, could not be surveyed due to visibility problems, but it is expected to contain numerous sites, possibly as many as the Moore Farm (Subarea 12-4). Sites A-82, 83, and 84 are probably base camps and A-85 a procurement site.

The Mrs. George C. Rothwell farm, due east of Pratt's, offered very poor visibility and only one diagnostic artifact was found. This was a corner-notched chert biface (Woodland I) found along with a non-diagnostic quartz biface fragment, flakes, and FCR at a minor confluence (site 7K-A-87). Several other small scatters of flakes and FCR were found along the stream banks around the edge of the farm (7K-A-86, 88-90).

The Channie Irwin farm to the east lies directly south of the Moore Farm, and like the Rothwell property, produced low amounts of artifacts (again, almost certainly due to the average 2% surface visibility). One Minguannan sherd (Plate 6), 2 flakes, and 3 FCR were recorded from a small rise well up an unnamed tributary to Mill Creek and was designated 7K-A-95. Site 7K-A-92, at the confluence of two minor tributaries, produced a

PLATE 6

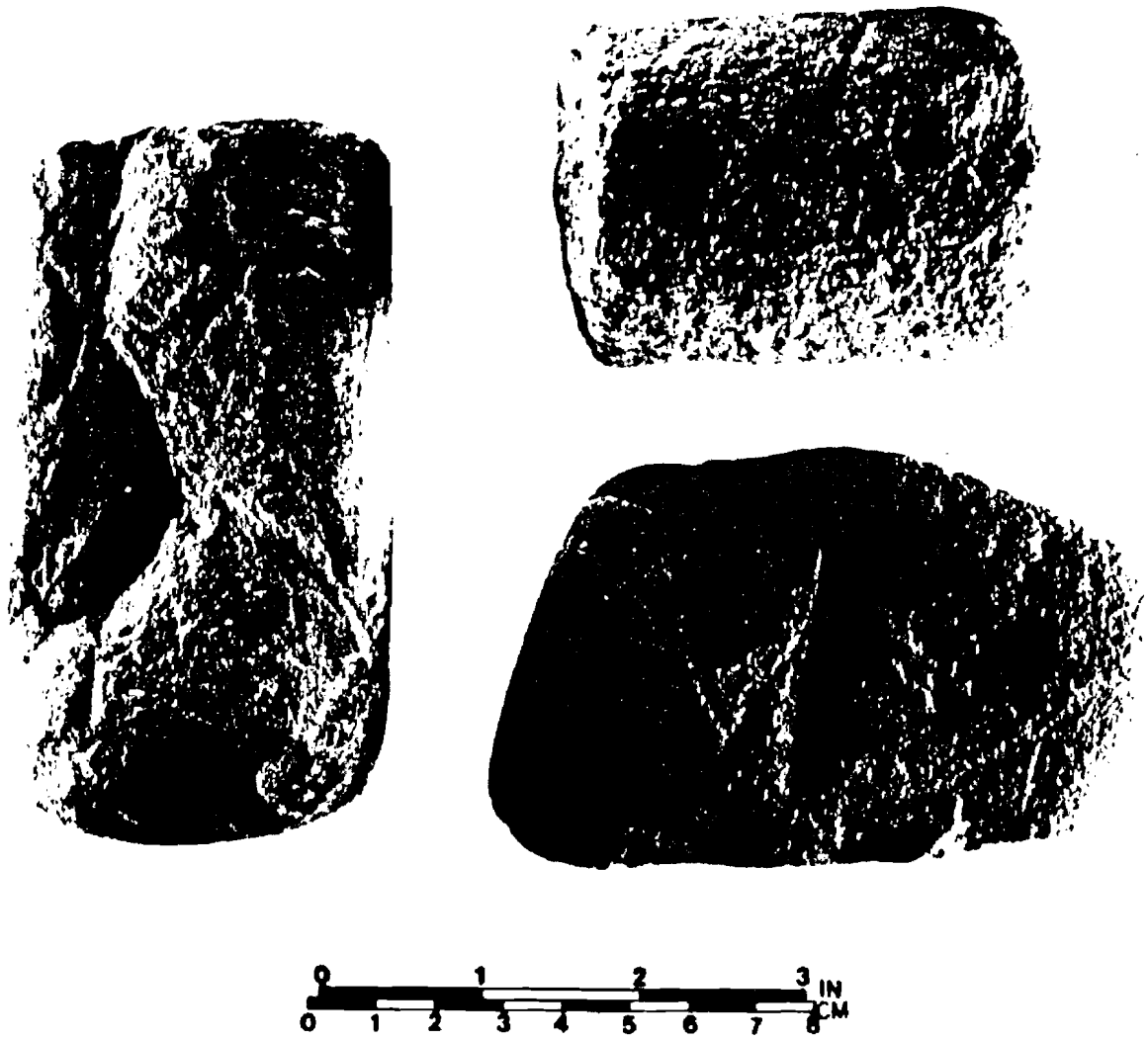
Selected Prehistoric Ceramics from Sites in the Route 13 South Survey



TOP ROW, left to right: Townsend sherd from 7NC-J-162, Killens Ware sherd from 7K-C-251, Mockley sherd from 7K-D-33, Wolfe Neck sherd from 7K-D-33; MIDDLE ROW, left to right: Minguannan sherd from 7K-F-136, Minguannan sherd from 7K-C-313, Coulbourn sherd from 7K-D-33; BOTTOM ROW, left to right: Wolfe Neck sherd from 7K-D-85, Minguannan sherd from 7K-F-136, Marcey Creek sherd from 7K-C-313; Minguannan sherd from 7K-A-95, Minguannan sherd from 7K-C-353.

PLATE 7

Selected Ground Stone Tools from Sites in the Route 13 South Survey



LEFT: pestle fragment from 7K-C-242; UPPER RIGHT: pestle fragment from 7K-A-92; LOWER RIGHT: abrading stone from 7NC-J-124

hammerstone, pestle fragment (Plate 7), and 2 flakes, but no diagnostic artifacts. The other three sites, A-91, 93, and 94, were small scatters of flakes and FCR along the stream banks.

In summary, the Smyrna Study Area provided an excellent overview of prehistoric cultural resources, especially at the confluence of Duck and Mill Creeks. The Jones, Bailey, Moore, Schiff, Fox, Tush, and Shane farms all produced sites of varying quantity and type in the confluence vicinity, and surface site patterns, although admittedly sketchy, indicate that controlled surface collection and systematic sub-surface excavation could yield detailed information on a wide variety of archaeological problems in the northern Delmarva Peninsula. On the Moore farm, for example, diagnostic artifacts were recorded from two sites of the Paleo-Indian Period, one from the Archaic, seven from the Woodland I, and four from the Woodland II. Many of the Woodland sites are thought to be base camps: A-47, A-61, A-64, A-69, and A-73 for the Woodland I and A-62 and A-74 for the Woodland II. Excavation of these and the numerous outlier sites in this vicinity (i.e. those mostly small sites which produced low amounts of debitage and no diagnostic artifacts, or one or two diagnostic artifacts and no debitage) should reveal intrasite and intersite patterns regarding subsistence, settlement, technology, and social organization of the prehistoric peoples of the Duck/Mill Creek drainage.

Area 3 - Leipsic Study Area - Surface Survey

Figure 25 shows the archaeological sites recorded during surface survey and the subareas noted in the Leipsic area. Locational attributes of the sites are listed in Table 4 and cultural historical data are listed in Table 5. The Leipsic area as defined extends from the town of Kenton on the west to a point on the Leipsic River about three miles east of present U.S. 13 and includes land on both sides of the Leipsic River, Garrison's Lake and Massey's Millpond, as well as several tributaries to the Leipsic, including Alston, Willis, Taylor, and Pinks Branches. Each of the defined subareas and its sites are discussed below.

Subarea 3-1 Subarea 1 lies in the westernmost part of the Leipsic Area and contains all land west of Kent 91. It is mostly farmland, although some small woodlots sit adjacent to the streams. The waterways cut deeply enough here to form 3m to 6m bluffs along their courses. Most of the subarea was in heavy crop growth at the time of the survey and only one small field could be walked. This was immediately west of the confluence of Pinks Branch and an unnamed tributary entering from the northwest. Three sites were located on the terrace about 1.5m above the streams and were designated 7K-C-116, 117,and 118. Site C-116 contained four quartz core/chopping tools, four quartz flake tools, 1 jasper flake tool, two quartz biface rejects, and 300-400 fire-cracked rocks. Some sort of butchering/processing station is suggested by this assemblage. Site C-117, immediately to the north, contained similar artifacts and is probably

FIGURE 25

Sites and Subareas – Leipsic Study Area 3

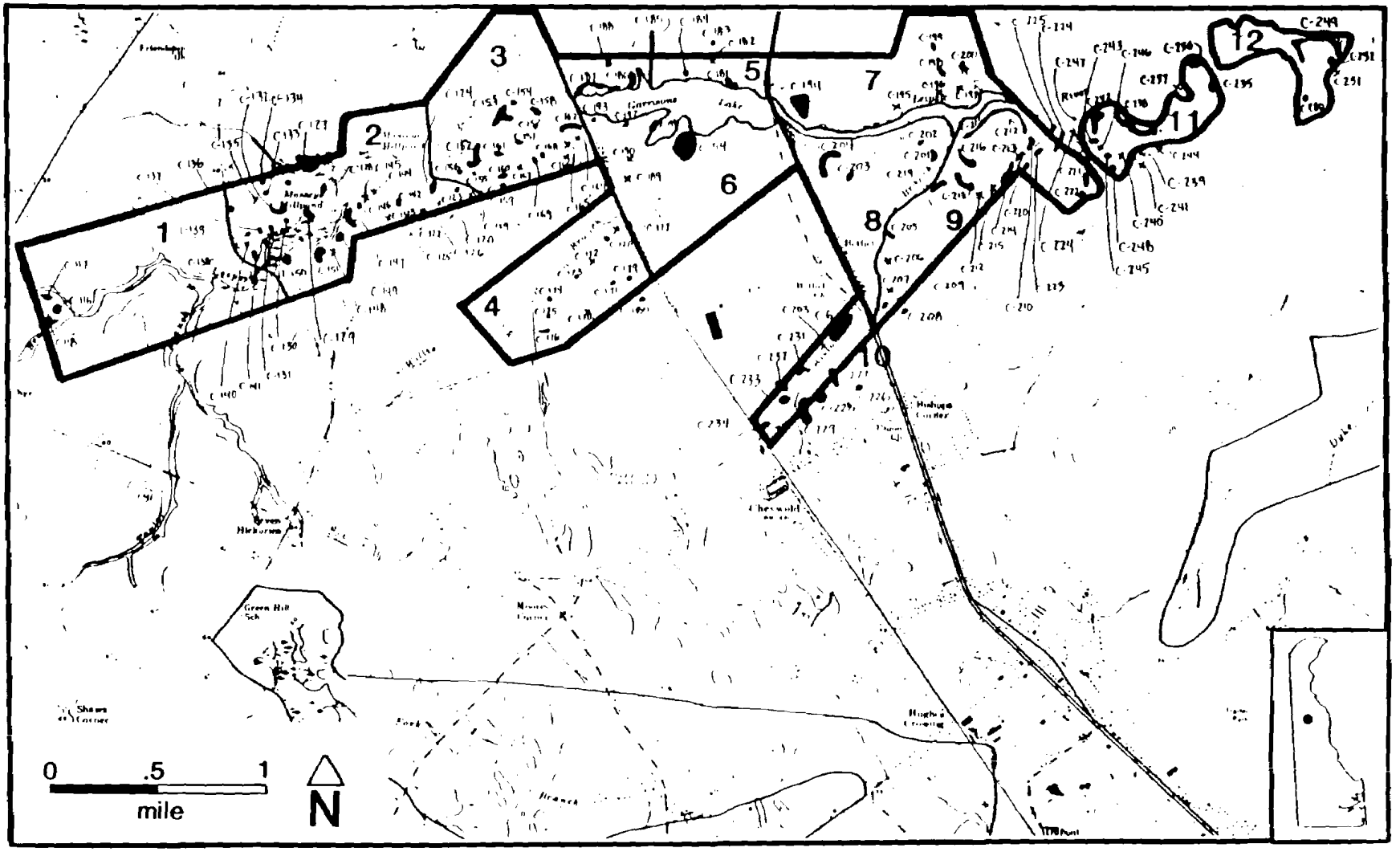


TABLE 4

LOCATIONAL DATA - PREHISTORIC RESOURCES - LEIPSIC STUDY AREA

SITE NUMBER	CRS NUMBER	USGS QUAD	UTM NORTH	UTM EAST	GEOMORPHOLOGICAL SETTING	PRIMARY SOIL SERIES	SECONDARY SOIL SERIES	DRAINAGE	SURFACE WATER SETTING	CONF.	WATER DISTANCE (METERS)	SLOPE	ASPECT	ELEVATION
7K-F-116	K-5946	KENTON	402	6357	LOW TERRACE	SaB	Fa	LEIPSIC	STREAM	Y	2	2	E	44
7K-F-117	K-5947	KENTON	406	354	LOW TERRACE	SaB	Fa	LEIPSIC	STREAM	Y	2	2	E	44
7K-F-118	K-5948	KENTON	429	353	LOW TERRACE	SaB		LEIPSIC	STREAM	Y	2	2	E	40
7K-F-119	K-5949	DOVER	485	30	LOW TERRACE	SaC2		LEIPSIC	STREAM	N	2	5	W	30
7K-F-120	K-5950	DOVER	516	32	LOW TERRACE	SaB		LEIPSIC	STREAM	N	0	2		30
7K-F-121	K-5951	DOVER	521	33	LOW TERRACE	SaB		LEIPSIC	STREAM	N	0	2	E	36
7K-F-122	K-5952	DOVER	511	24	LOW TERRACE	Fa		LEIPSIC	STREAM	N	1	0	E	30
7K-F-123	K-5953	DOVER	512	29	LOW TERRACE	SaC2		LEIPSIC	STREAM	N	0	5	E	38
7K-F-124	K-5954	DOVER	523	26	LOW TERRACE	SaD2		LEIPSIC	STREAM	Y	1	10	W	35
7K-F-125	K-5955	DOVER	508	20	LOW TERRACE	SaB		LEIPSIC	STREAM	N	2	2	E	35
7K-F-126	K-5956	DOVER	514	22	LOW TERRACE	SaB		LEIPSIC	STREAM	N	1	2	E	30
7K-F-127	K-5957	KENTON	529	436	LOW TERRACE	SaB		LEIPSIC	STREAM	Y	2	2	S	40
7K-F-128	K-5958	KENTON	520	439	LOW TERRACE	SaB		LEIPSIC	STREAM	Y	3	2	S	40
7K-F-129	K-5959	KENTON	512	436	LOW TERRACE	SaB		LEIPSIC	STREAM	Y	1	5	SE	20
7K-F-130	K-5960	KENTON	509	430	LOW TERRACE	SaB		LEIPSIC	STREAM	N	3	2	S	40
7K-F-131	K-5961	KENTON	502	425	LOW TERRACE	SaB		LEIPSIC	STREAM	Y	3	2	SE	40
7K-F-132	K-5962	KENTON	513	425	LOW TERRACE	SaB		LEIPSIC	STREAM	N	0	2	N	40
7K-F-133	K-5963	KENTON	508	423	LOW TERRACE	SaB		LEIPSIC	STREAM	N	0	2	N	40
7K-F-134	K-5964	KENTON	521	423	LOW TERRACE	SaB		LEIPSIC	STREAM	N	0	2	S	40
7K-F-135	K-5965	KENTON	518	420	RISE	W		LEIPSIC	STREAM	N	1	0	NE	45
7K-F-136	K-5966	KENTON	513	412	LOW TERRACE	SaB		LEIPSIC	STREAM	N	4	2	SW	40
7K-F-137	K-5967	KENTON	507	423	LOW TERRACE	SaB		LEIPSIC	STREAM	Y	2	2	SE	40
7K-F-138	K-5968	KENTON	504	414	LOW TERRACE	SaB		LEIPSIC	STREAM	N	3	2	E	40
7K-F-139	K-5969	KENTON	502	414	LOW TERRACE	SaB		LEIPSIC	STREAM	N	1	2	W	40
7K-F-140	K-5970	KENTON	504	419	FLOODPLAIN	SaB		LEIPSIC	STREAM	Y	0	2	E	40
7K-F-141	K-5971	KENTON	500	419	LOW TERRACE	SaB		LEIPSIC	STREAM	Y	1	2	S	30
7K-F-142	K-5972	DOVER	518	15	LOW TERRACE	SaB		LEIPSIC	STREAM	N	0	2	SE	40
7K-F-143	K-5973	DOVER	514	13	LOW TERRACE	SaB		LEIPSIC	STREAM	N	0	2	W	40
7K-F-144	K-5974	DOVER	521	9	LOW TERRACE	W		LEIPSIC	STREAM	Y	1	0	NW	35
7K-F-145	K-5975	DOVER	519	7	LOW TERRACE	SaB		LEIPSIC	STREAM	N	2	2	NW	40
7K-F-146	K-5976	DOVER	519	6	LOW TERRACE	SaB		LEIPSIC	STREAM	N	2	2	NW	40
7K-F-147	K-5977	DOVER	511	1	LOW TERRACE	SaB		LEIPSIC	STREAM	Y	2	2	N	40
7K-F-148	K-5978	KENTON	501	444	LOW TERRACE	SaB		LEIPSIC	STREAM	N	4	2	NW	40
7K-F-149	K-5979	KENTON	506	436	LOW TERRACE	W	SaB	LEIPSIC	STREAM	N	3	3	NW	40
7K-F-150	K-5980	KENTON	499	430	LOW TERRACE	SaB		LEIPSIC	STREAM	N	1	2	NW	30
7K-F-151	K-5981	KENTON	501	440	LOW TERRACE	SaB	Fa	LEIPSIC	STREAM	Y	3	3	N	30
7K-F-152	K-5982	DOVER	533	40	LOW TERRACE	SaB		LEIPSIC	STREAM	Y	1	2	NW	30
7K-F-153	K-5983	DOVER	515	50	LOW TERRACE	SaB		LEIPSIC	STREAM	Y	2	2	NW	30
7K-F-154	K-5984	DOVER	517	54	LOW TERRACE	SaB		LEIPSIC	STREAM	Y	2	2	N	25
7K-F-155	K-5985	DOVER	527	41	LOW TERRACE	SaB		LEIPSIC	STREAM		1	2	NW	30
7K-F-156	K-5986	DOVER	521	35	LOW TERRACE	SaB		LEIPSIC	STREAM	Y	0	2	N	20
7K-F-157	K-5987	DOVER	522	54	LOW TERRACE	SaB		LEIPSIC	STREAM	N	0	2	W	40
7K-F-158	K-5988	DOVER	516	59	LOW TERRACE	SaB		LEIPSIC	STREAM	N	3	2	N	10
7K-F-159	K-5989	DOVER	521	50	LOW TERRACE	SaB		LEIPSIC	STREAM	N	1	2	S	46
7K-F-160	K-5990	DOVER	521	51	LOW TERRACE	SaB		LEIPSIC	STREAM	N	0	2	S	40

TABLE 4 (cont.)

LOCATIONAL DATA - PREHISTORIC RESOURCES - REDISTIC STUDY AREA

SITE NUMBER	CRS NUMBER	USGS QUAD	UTM NORTH	UTM EAST	GEOMORPHOLOGICAL SETTING	PRIMARY SOIL SERIES	SECONDARY SOIL SERIES	DRAINAGE	SURFACE WATER SETTING	CONF.	WATER DISTANCE (METERS)	SLOPE	ASPECT	ELEVATION
[illegible]	K-5992	DOVER	540	67	LOW TERRACE	[illegible]		[illegible]	STREAM	N	2	2	N	20
[illegible]	K-5993	DOVER	543	59	BLUFF	[illegible]		[illegible]	STREAM	N	3	2	N	32
[illegible]	K-5994	DOVER	539	71	BLUFF	[illegible]		[illegible]	STREAM	N	3	2	N	33
[illegible]	K-5995	DOVER	536	69	BLUFF	[illegible]		[illegible]	STREAM	N	2	2	E	30
[illegible]	K-5996	DOVER	534	68	LOW TERRACE	[illegible]		[illegible]	STREAM	N	3	2	E	40
[illegible]	K-5997	DOVER	527	55	LOW TERRACE	[illegible]		[illegible]	STREAM	N	5	2	E	40
[illegible]	K-5998	DOVER	529	65	LOW TERRACE	[illegible]		[illegible]	STREAM	N	2	2	E	40
[illegible]	K-5999	DOVER	526	61	LOW TERRACE	[illegible]		[illegible]	STREAM	N	3	2	E	40
[illegible]	K-6000	DOVER	481	27	BLUFF	[illegible]		[illegible]	STREAM	N	7	2	W	50
[illegible]	K-6001	DOVER	494	85	LOW TERRACE	[illegible]		[illegible]	STREAM	N	1	2	E	30
[illegible]	K-6002	DOVER	502	77	LOW TERRACE	[illegible]		[illegible]	STREAM	N	4	2	N	30
[illegible]	K-6003	DOVER	495	72	LOW TERRACE	[illegible]		[illegible]	STREAM	N	5	2	N	40
[illegible]	K-6004	DOVER	489	64	LOW TERRACE	[illegible]		[illegible]	STREAM	Y	3	5	NW	30
[illegible]	K-6005	DOVER	464	64	LOW TERRACE	[illegible]		[illegible]	STREAM		3	5	W	30
[illegible]	K-6006	DOVER	460	61	TERRACE	[illegible]		[illegible]	STREAM		1	2	W	30
[illegible]	K-6007	DOVER	510	84	LOW TERRACE	[illegible]		[illegible]	STREAM	N	1	2	NW	30
[illegible]	K-6008	DOVER	507	81	LOW TERRACE	[illegible]		[illegible]	STREAM	Y	2	2	N	30
[illegible]	K-6009	DOVER	494	89	BLUFF	[illegible]		[illegible]	STREAM	N	1	2	W	40
[illegible]	K-6010	DOVER	489	94	LOW TERRACE	[illegible]		[illegible]	STREAM	N	1	2	S	30
[illegible]	K-6011	DOVER	555	121	LOW TERRACE	[illegible]		[illegible]	STREAM	Y	1	5	S	20
[illegible]	K-6012	DOVER	561	114	BLUFF	[illegible]		[illegible]	STREAM	Y	1	5	SW	25
[illegible]	K-6013	DOVER	567	114	LOW TERRACE	[illegible]		[illegible]	STREAM	Y	1	5	W	10
[illegible]	K-6014	DOVER	558	106	LOW TERRACE	[illegible]		[illegible]	STREAM	Y	2	2	S	10
[illegible]	K-6015	DOVER	563	94	LOW TERRACE	[illegible]		[illegible]	STREAM	Y	5	2	W	10
[illegible]	K-6016	DOVER	555	88	BLUFF	[illegible]		[illegible]	STREAM	Y	1	2	S	20
[illegible]	K-6017	DOVER	554	77	BLUFF	[illegible]		[illegible]	STREAM	Y	1	2	S	10
[illegible]	K-6018	DOVER	560	83	BLUFF	[illegible]	[illegible]	[illegible]	STREAM	Y	4	2	SE	35
[illegible]	K-6019	DOVER	527	87	BLUFF	[illegible]		[illegible]	STREAM	N	2	0	E	35
[illegible]	K-6020	DOVER	533	88	BLUFF	[illegible]		[illegible]	STREAM	N	2	0	E	40
[illegible]	K-6021	DOVER	541	96	LOW TERRACE	[illegible]		[illegible]	STREAM	Y	1	2	E	10
[illegible]	K-6022	DOVER	542	86	BLUFF	[illegible]		[illegible]	STREAM	N	1	2	N	10
[illegible]	K-6023	DOVER	541	76	LOW TERRACE	[illegible]		[illegible]	STREAM	N	1	2	N	10
[illegible]	K-6024	DOVER	549	143	BLUFF	[illegible]		[illegible]	STREAM	Y	1	2	SE	20
[illegible]	K-6025	DOVER	547	172	BLUFF	[illegible]		[illegible]	STREAM	Y	1	0	SE	10
[illegible]	K-6026	DOVER	551	136	BLUFF	[illegible]		[illegible]	STREAM	N	2	0	S	10
[illegible]	K-6027	DOVER	554	140	BLUFF	[illegible]		[illegible]	STREAM	Y	3	0	E	10
[illegible]	K-6028	DOVER	550	186	BLUFF	[illegible]		[illegible]	STREAM	N	2	0	E	10
[illegible]	K-6029	DOVER	567	183	BLUFF	[illegible]		[illegible]	STREAM	N	1	2	E	10
[illegible]	K-6030	DOVER	560	192	LOW TERRACE	U=		[illegible]	STREAM	N	1	0	W	10
[illegible]	K-6031	DOVER	533	184	BLUFF	[illegible]		[illegible]	STREAM	N	2	5	E	10
[illegible]	K-6032	DOVER	537	179	LOW TERRACE	[illegible]		[illegible]	STREAM	Y	6	5	N	15
[illegible]	K-6033	DOVER	526	164	LOW TERRACE	[illegible]		[illegible]	STREAM	N	3	5	N	20
[illegible]	K-6034	DOVER	531	152	BLUFF	[illegible]		[illegible]	STREAM	Y	4	5	NW	10
[illegible]	K-6035	DOVER	509	171	LOW TERRACE	[illegible]	[illegible]	[illegible]	STREAM	Y	1	2	W	30
[illegible]	K-6036	DOVER	493	170	BLUFF	[illegible]		[illegible]	STREAM	Y	2	2	W	20

TABLE A-1 (cont.)

ADDITIONAL DATA PREHISTORIC RESOURCES WITHIN STUDY AREA

SITE NUMBER	P-# NUMBER	USGS QUAD	UTM NORTH	UTM EAST	GEOMORPHOLOGICAL SETTING	PRIMARY SOIL SERIES	SECONDARY SOIL SERIES	DRAINAGE	SURFACE WATER SETTING	CONF.	WATER DISTANCE (METERS)	SLOPE	ASPECT	ELEVATION
CA-[illegible]	P-[illegible]	DOVER	[illegible]90	175	LOW TERRACE	[illegible]		EPHEMERAL	STREAM	N	2	2	W	30
CA-[illegible]	P-[illegible]	DOVER	[illegible]89	167	RIDGE	[illegible]	[illegible]	EPHEMERAL	STREAM	Y	0	5	W	50
CA-[illegible]	P-[illegible]	DOVER	556	214	RIDGE	[illegible]		EPHEMERAL	STREAM	Y	1	2	SE	10
CA-[illegible]	P-[illegible]	DOVER	543	205	BLUFF	[illegible]		EPHEMERAL	STREAM	N	1	5	N	10
CA-[illegible]	P-[illegible]	DOVER	542	207	RIDGE	[illegible]		EPHEMERAL	STREAM	Y	2	2	W	20
CA-[illegible]	P-[illegible]	DOVER	538	210	LOW TERRACE	[illegible]		EPHEMERAL	STREAM	N	1	5	S	10
CA-[illegible]	P-[illegible]	DOVER	527	208	LOW TERRACE	[illegible]		EPHEMERAL	STREAM	N	1	0	SE	10
CA-[illegible]	P-[illegible]	DOVER	523	203	RIDGE	[illegible]		EPHEMERAL	STREAM	N	2	0	SE	2
CA-[illegible]	P-[illegible]	DOVER	531	194	LOW TERRACE	[illegible]		EPHEMERAL	STREAM	Y	3	5	W	10
CA-[illegible]	P-[illegible]	DOVER	530	240	LOW TERRACE	[illegible]		EPHEMERAL	STREAM	N	2	0	E	20
CA-[illegible]	P-[illegible]	DOVER	534	193	LOW TERRACE	[illegible]		EPHEMERAL	STREAM	Y	1	5	SW	10
CA-[illegible]	P-[illegible]	DOVER	524	196	LOW TERRACE	[illegible]		EPHEMERAL	STREAM	Y	4	5	NW	10
CA-[illegible]	P-[illegible]	DOVER	530	212	LOW TERRACE	[illegible]	[illegible]	EPHEMERAL	STREAM	N	1	2	W	10
CA-[illegible]	P-[illegible]	DOVER	528	230	LOW TERRACE	[illegible]	W	EPHEMERAL	STREAM	N	1	5	E	20
CA-[illegible]	P-[illegible]	DOVER	529	232	LOW TERRACE	MU1	MU	EPHEMERAL	STREAM	Y	2	0	SE	10
CA-[illegible]	P-[illegible]	DOVER	531	216	LOW TERRACE	[illegible]		EPHEMERAL	STREAM	N	0	5	W	10
CA-[illegible]	P-[illegible]	DOVER	532	224	LOW TERRACE	MU		EPHEMERAL	STREAM	Y	0	0	N	5
CA-[illegible]	P-[illegible]	DOVER	532	221	LOW TERRACE	MU	[illegible]	EPHEMERAL	STREAM	Y	0	0	N	0
CA-[illegible]	P-[illegible]	DOVER	461	162	RIDGE	[illegible]		EPHEMERAL	STREAM	N	1	2	S	50
CA-[illegible]	P-[illegible]	DOVER	465	154	LOW TERRACE	[illegible]		EPHEMERAL	STREAM	N	3	2	NW	30
CA-[illegible]	P-[illegible]	DOVER	459	150	RIDGE	[illegible]		EPHEMERAL	STREAM	N	3	2	NW	28
CA-[illegible]	P-[illegible]	DOVER	454	145	RIDGE	[illegible]	W	EPHEMERAL	STREAM	Y	2	2	W	35
CA-[illegible]	P-[illegible]	DOVER	479	154	LOW TERRACE	[illegible]		EPHEMERAL	STREAM	N	4	2	S	20
CA-[illegible]	P-[illegible]	DOVER	423	149	RIDGE	[illegible]		EPHEMERAL	STREAM	Y	3	2	SE	30
CA-[illegible]	P-[illegible]	DOVER	467	143	LOW TERRACE	[illegible]		EPHEMERAL	STREAM	Y	3	2	SE	30
CA-[illegible]	P-[illegible]	DOVER	463	133	TERRACE	[illegible]		EPHEMERAL	STREAM	Y	2	2	NE	25
CA-[illegible]	P-[illegible]	DOVER	458	134	TERRACE	[illegible]		EPHEMERAL	STREAM	Y	2	2	SE	25
CA-[illegible]	P-[illegible]	DOVER	450	131	LOW TERRACE	[illegible]		EPHEMERAL	STREAM	N	1	2	S	15
CA-[illegible]	P-[illegible]	DOVER	553	221	LOW TERRACE	[illegible]		EPHEMERAL	STREAM	N	2	2	W	10
CA-[illegible]	P-[illegible]	DOVER	559	264	LOW TERRACE	[illegible]		EPHEMERAL	STREAM	Y	2	2	S	10
CA-[illegible]	P-[illegible]	DOVER	553	263	LOW TERRACE	[illegible]		EPHEMERAL	STREAM	N	1	2	W	5
CA-[illegible]	P-[illegible]	DOVER	535	251	RIDGE	[illegible]		EPHEMERAL	STREAM	N	0	0	S	12
CA-[illegible]	P-[illegible]	DOVER	542	244	LOW TERRACE	[illegible]		EPHEMERAL	STREAM	Y	2	2	SE	10
CA-[illegible]	P-[illegible]	DOVER	535	248	LOW TERRACE	[illegible]		EPHEMERAL	STREAM	N	1	0	S	20
CA-[illegible]	P-[illegible]	DOVER	531	248	LOW TERRACE	[illegible]		EPHEMERAL	STREAM	N	0	2	S	15
CA-[illegible]	P-[illegible]	DOVER	543	234	RIDGE	[illegible]		EPHEMERAL	STREAM	Y	3	2	NW	10
CA-[illegible]	P-[illegible]	DOVER	537	236	LOW TERRACE	[illegible]		EPHEMERAL	STREAM	N	3	2	W	10
CA-[illegible]	P-[illegible]	DOVER	532	239	RIDGE	[illegible]	[illegible]	EPHEMERAL	STREAM	N	6	0	W	10
CA-[illegible]	P-[illegible]	DOVER	535	232	FLOODPLAIN	[illegible]		EPHEMERAL	STREAM	N	5	2	W	10
CA-[illegible]	P-[illegible]	DOVER	532	230	BLUFF	[illegible]		EPHEMERAL	STREAM	N	1	2	W	5
CA-[illegible]	P-[illegible]	DOVER	527	240	LOW TERRACE	[illegible]		EPHEMERAL	STREAM	Y	3	2	W	5
CA-[illegible]	P-[illegible]	DOVER	568	302	TERRACE	[illegible]	[illegible]	EPHEMERAL	STREAM	Y	0	2	N,	5
CA-[illegible]	P-[illegible]	DOVER	561	238	RIDGE	[illegible]		EPHEMERAL	STREAM	N	3	2	E	5
CA-[illegible]	P-[illegible]	DOVER	565	230	LOW TERRACE	[illegible]		EPHEMERAL	STREAM	Y	4	10	NE	5
CA-[illegible]	P-[illegible]	DOVER	567	296	RIDGE	[illegible]		EPHEMERAL	STREAM	N	3	0	NE	10
CA-[illegible]	P-[illegible]	DOVER	569	221	LOW TERRACE	[illegible]		EPHEMERAL	STREAM	Y	1	0	NW	5

TABLE 5

CULTURAL - HISTORICAL DATA - LETTSIC AREA

SITE NUMBER	PALEO	ARCHAIC	WOODLAND I	WOODLAND II	EP	BL	AN	CA	HG	DA	DE	SE	MG	HISTORIC	BIFACE	SCRAPER	FLAKE TOOL	CORE	FLAKES	GROUND STONE TOOL	FCR	CERAMICS
2K C 116															Y		Y	Y			Y	
2K C 117															Y		Y		Y		Y	
2K C 118																	Y	Y	Y	Y	Y	
2K C 119			Y		Y										Y							
2K C 120																	Y					
2K C 125															Y							
2K C 126																	Y					
2K C 127															Y		Y		Y		Y	
2K C 128															Y		Y		Y		Y	
2K C 129																	Y	Y	Y	Y	Y	
2K C 130																			Y		Y	
2K C 131																			Y		Y	
2K C 132															Y	Y	Y	Y	Y		Y	
2K C 133																		Y			Y	
2K C 134															Y						Y	
2K C 135																	Y				Y	
2K C 136																					Y	
2K C 137																		Y			Y	
2K C 138																	Y					
2K C 139																					Y	
2K C 140																		Y				
2K C 141															Y		Y	Y	Y		Y	
2K C 142																					Y	
2K C 143																					Y	
2K C 144																	Y					
2K C 145															Y		Y		Y			
2K C 146																		Y	Y		Y	
2K C 147															Y				Y		Y	
2K C 148																		Y			Y	
2K C 149		Y																Y	Y		Y	
2K C 150																					Y	
2K C 151																			Y		Y	
2K C 152			Y			Y									Y		Y	Y	Y		Y	
2K C 153																	Y		Y		Y	
2K C 154																	Y	Y	Y			
2K C 155			Y												Y							
2K C 156																					Y	
2K C 157																	Y		Y		Y	
2K C 158																	Y	Y	Y		Y	
2K C 159															Y						Y	
2K C 160																					Y	
2K C 161			Y			Y									Y			Y	Y		Y	
2K C 162															Y	Y	Y	Y	Y	Y	Y	
2K C 163						Y									Y			Y	Y		Y	
2K C 164															Y				Y		Y	
2K C 165															Y		Y	Y			Y	
2K C 166																	Y					
2K C 167															Y							
2K C 168																Y					Y	

TABLE 5 (cont.)

CULTURAL - HISTORICAL DATA [illegible] STUDY AREA

SITE NUMBER	PALEO	ARCHAIC	WOODLAND I	WOODLAND II	CF	BL	UN	CA	WC	NA	HP	SC	MG	HISTORIC	BIFACE	SCRAPER	FLAKE TOOL	CORE	FLAKES	GROUND STONE TOOL	FCR	CERAMICS
2K E 169														Y			Y				Y	
2K E 170																	Y					
2K E 171																	Y					
2K E 172																					Y	
2K E 173																			Y			
2K E 174			Y			Y													Y	Y	Y	
2K E 175															Y		Y		Y		Y	
2K E 176																			Y		Y	
2K E 177																	Y				Y	
2K E 178																	Y		Y			
2K E 179			Y												Y						Y	
2K E 180																	Y					
2K E 181																			Y		Y	
2K E 182																			Y		Y	
2K E 183			Y			Y									Y							
2K E 184																Y					Y	
2K E 185																			Y		Y	
2K E 186															Y			Y	Y		Y	
2K E 187																Y					Y	
2K E 188															Y				Y		Y	
2K E 189																			Y		Y	
2K E 190																			Y		Y	
2K E 191																			Y		Y	
2K E 192																			Y		Y	
2K E 193																			Y			
2K E 194																			Y		Y	
2K E 195				Y									Y						Y		Y	Y
2K E 196																			Y			
2K E 197																			Y		Y	
2K E 198																			Y		Y	
2K E 199																					Y	
2K E 200																			Y		Y	
2K E 201			Y																Y		Y	Y
2K E 202																			Y		Y	
2K E 203																			Y		Y	
2K E 204																			Y		Y	
2K E 205																	Y		Y		Y	
2K E 206																					Y	
2K E 207																					Y	
2K E 208																	Y					
2K E 209																					Y	
2K E 210																					Y	
2K E 211		Y	Y	Y								Y		Y	Y	Y	Y		Y	Y	Y	Y
2K E 212																	Y					
2K E 213															Y		Y		Y		Y	
2K E 214																			Y		Y	
2K E 215																					Y	
2K E 216															Y		Y		Y		Y	
2K E 217																	Y					

TABLE 5 (cont.)

CULTURAL - HISTORICAL DATA - LIPSIC STUDY AREA

SITE NUMBER	PALEO	ARCHAIC	WOODLAND I	WOODLAND II	CT	DL	HN	CA	WR	DA	HF	SF	MG	HISTORIC	PIERCE	SCRAPER	FLAKE TOOL	CORE	FLAKES	GROUND STONE TOOL	FCR	CERAMICS
[illegible]																Y	Y		Y		Y	
[illegible]																					Y	
[illegible]																	Y				Y	
[illegible]																			Y		Y	
[illegible]																					Y	
[illegible]																					Y	
[illegible]																					Y	
[illegible]																		Y			Y	
[illegible]																			Y		Y	
[illegible]																			Y		Y	
[illegible]															Y		Y		Y		Y	
[illegible]			Y												Y	Y	Y		Y		Y	Y
[illegible]				Y									Y		Y							
[illegible]																	Y		Y		Y	
[illegible]														Y	Y			Y	Y	Y	Y	
[illegible]																					Y	
[illegible]																	Y		Y		Y	
[illegible]																	Y				Y	
[illegible]															Y		Y		Y	Y	Y	
[illegible]															Y				Y		Y	
[illegible]																	Y					
[illegible]			Y												Y		Y	Y	Y	Y	Y	
[illegible]																	Y					
[illegible]															Y			Y	Y			
[illegible]																				Y		
[illegible]															Y	Y	Y	Y	Y	Y	Y	Y
[illegible]			Y						Y						Y	Y	Y	Y	Y		Y	
[illegible]			Y					Y							Y		Y		Y			
[illegible]																		Y				
[illegible]			Y				Y															Y
[illegible]																	Y		Y		Y	
[illegible]			Y	Y							Y				Y		Y	Y	Y		Y	Y
[illegible]																					Y	
[illegible]				Y									Y						Y		Y	Y
[illegible]															Y		Y	Y	Y		Y	
[illegible]			Y												Y				Y		Y	
[illegible]																			Y		Y	
[illegible]																			Y		Y	
[illegible]															Y		Y					
[illegible]																		Y				
[illegible]															Y							
[illegible]															Y		Y		Y		Y	

related. Site C-118, immediately to the south of C-116, yielded a full-grooved ax, one pitted stone, 2 cores, 6 utilized flakes and flake tools (Plate 8), and about 130 fire-cracked rocks. Although the ax suggests an Archaic Period occupation for the site, no diagnostic bifaces were found.

Subarea 3-2 This subarea is situated between Kent 91 and Kent 42 and includes land on both sides of Massey's Millpond. Most of the subarea offered some degree of ground visibility during the pedestrian survey and produced 33 previously unrecorded sites. The first of this group was situated on some headlands just south of Massey's Millpond dam and included sites 7K-C-119 through 126. The most productive was C-124, on the berm of the rise immediately south of the intersection of Kent 42 and Kent 92. This Woodland I site produced one Bare Island chert point (Plate 1), one non-diagnostic quartz biface fragment, 6 utilized flakes, 6 unutilized flakes, and 3 FCR in an area measuring approximately 70 x 100 meters. Another Woodland I locale was 7K-C-119, which produced one black chert Bare Island-like point. The remaining sites contained small numbers of non-diagnostic broken tools, debitage, and FCR and are most likely small procurement sites.

Site 7K-C-127 is located at a point between two streams flowing southeast into Massey's Millpond and produced one non-diagnostic quartz biface fragment, one quartz utilized flake, one chert chopper, flakes, and FCR. The small knoll on which the site is located has suffered sheet erosion due to agriculture and the possibility of finding intact subsurface features is quite low.

Mrs. Edward Brown's Friendship Farm occupies the northwest part of the subarea, on the north side of Massey's Millpond. Sites 7K-C-128 through 141 were found here on a variety of water settings, including flowing and ephemeral streams and a large bay/basin feature. Site 7K-C-128 is located on a 5-meter rise almost completely surrounded by flowing and ephemeral streams and produced one quartz Lehigh/Koens-Crispin broadpoint, one non-diagnostic quartz biface fragment, utilized and unutilized flakes, and FCR.

The center of the field is dominated by a large bay/basin feature which measures about 200 meters in diameter and three sites were located in its rim. The largest is 7K-C-132 on the southeast side, which produced one rhyolite biface fragment, one chert early stage biface reject, 6 utilized flakes, one quartz scraper (Plate 9), one quartz core, 4 flakes, and 10 fire-cracked rocks. Two other sites were located on the north rim of the feature: 7K-C-133 produced one quartz core and 3 fire-cracked rocks while 7K-C-135 yielded one quartz utilized flake and one FCR.

All of the remaining sites on this farm were associated with permanent or ephemeral streams and none contained diagnostic artifacts. Site 7K-C-129, on the north side of the Leipsic

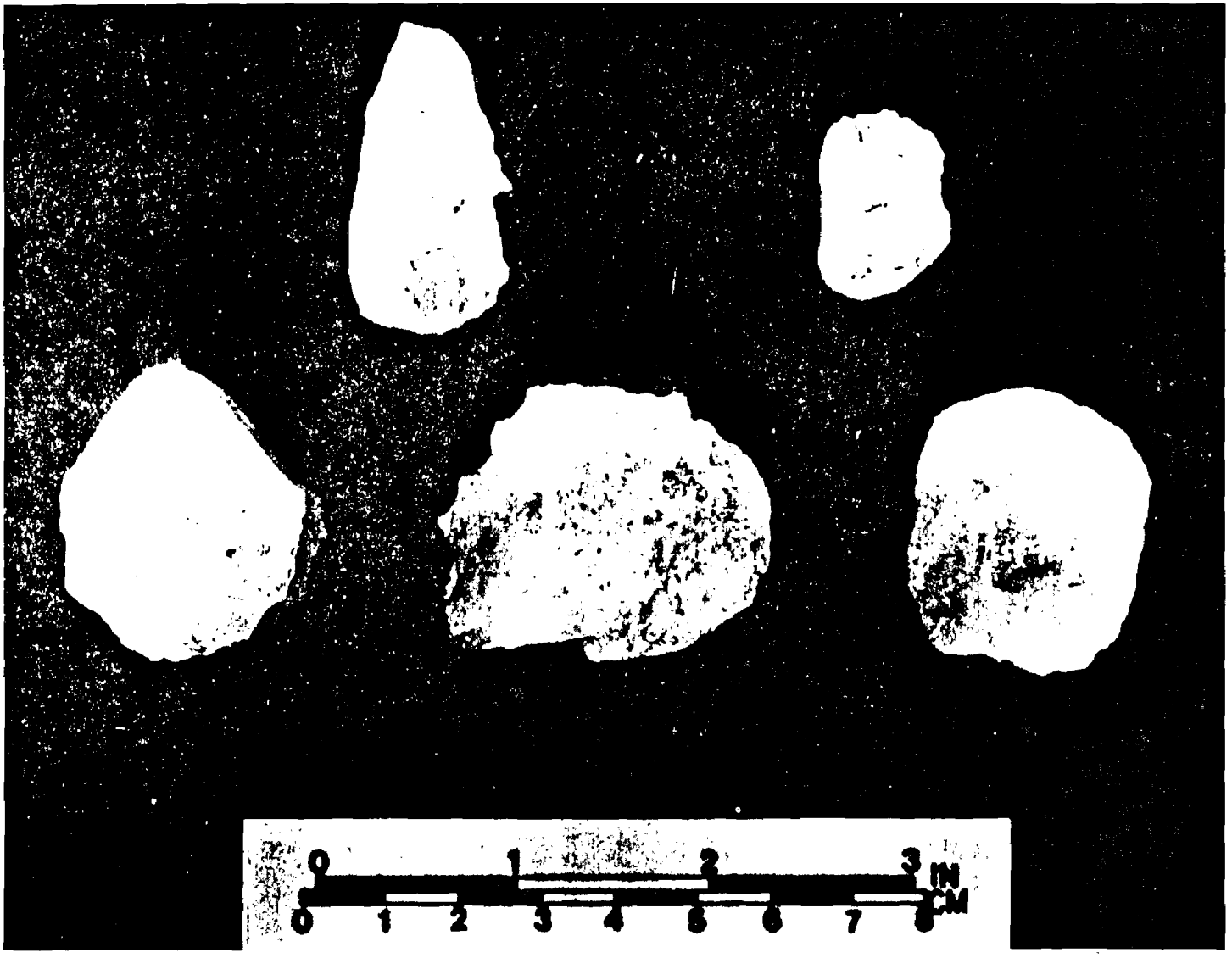
PLATE 8

Selected Ground Stone Tools from Sites in the Route 13 South Survey

LEFT: adze or hoe from 7NC-J-125; UPPER RIGHT: grooved ax from 7K-C-118; LOWER RIGHT: full-grooved ax from 7K-D-33

PLATE 9

Selected Bifacial Flake Tools from Sites in the Route 13 South Survey



TOP ROW, left to right: 7K-C-132, 7K-C-168; BOTTOM ROW, left to right: 7K-C-218, 7K-C-187, 7NC-J-119

River, was notable in that it produced a large pestle, as well as an argillite flake. The use of argillite for stone tools was relatively infrequent in the northern part of the Rt. 13 Corridor. However, it became more common in the southern part of the Corridor, especially from the Leipsic River south. The remaining sites on the farm contained small amounts of flakes, FCR, biface rejects, and cores. Included in this group are 7K-C-130, 131, 134, and 136 through 141 and they probably represent small, ephemeral occupations.

The last group of sites located in this subarea is a group found on the south side of Massey's Millpond on the James Faulkner, Stanley Short, and Allen Miller farms. Visibility was generally low due to the presence of no-till and fallow fields, and most of the sites were found on the weathered edges of the fields along the bluff tops overlooking the millpond and floodplain. The most notable site is 7K-C-147, located at the confluence of the millpond (Leipsic River) and an ephemeral stream. Although visibility was only 5%, one square-stemmed argillite point, one non-diagnostic chert biface fragment (possibly a Jack's Reef point), one quartz flake, and 35 FCR were found. Unfortunately, this site has since been partially destroyed by housing construction. Site 7K-C-146, also on the Faulkner farm, produced a Newark jasper core, a large argillite flake, as well as several other flakes and FCR. The remaining sites in this group, 7K-C-142 through 145 and 148 through 151, produced small amounts of debitage and FCR and an occasional non-diagnostic tool.

Subarea 3-3 This subarea contains all of the north and south banks of the Leipsic River between Massey's Millpond and Garrison's Lake and is bounded on the west by Kent 42 and on the east by the Conrail railroad tracks. Almost all of the subarea is farmland and most of it borders the Leipsic floodplain. Even considering the infilling of streams by modern agricultural erosion, the bluffs on the farms bordering the Leipsic still stand 5 to 7 meters above the floodplain. The northern and western portions of the subarea were entirely no-till fields and offered no visibility at the time of the pedestrian survey. The southeastern part was subjected to pedestrian survey and 18 sites were found on the two farms comprising this section. Mr. Edward Brown's Greenbriar Farm lies due east of Massey's Millpond dam and contained sites 7K-C-152 through 161. Site 7K-C-152 is an intensely occupied location around the head of an ephemeral stream draining northwesterly to the Leipsic. Even though visibility was only 20%, one quartz broadpoint, one jasper point tip, 5 non-diagnostic quartz biface fragments, one jasper utilized flake, one chert core, 35 flakes, and 34 FCR were recorded. It is one of the most heavily utilized sites in this type of setting (ephemeral streamhead) recorded in the Rt. 13 Corridor survey. Just south of this site was found a contracting stem jasper point, which was recorded as C-155 (Plate 1). Site C-153 is located about 300 meters downstream from C-152 and produced flake tools, utilized and unutilized flakes (including argillite), and FCR. The owner also showed us a pestle he had

collected from the site. Other diagnostic artifacts were found at C-159, at the head of another ephemeral stream leading to the Leipsic (corner-notched point), and C-161, on a sandy knoll about 200 meters east of the Leipsic (one jasper Lackawaxen point (Plate 1) plus other broken tools, debitage and FCR). The remaining sites on Brown's Greenbriar farm, C-154, 156, 157, 158, and 160, contained low amounts of non-diagnostic artifacts on a variety of streams settings.

Just to the east lies the John and Rusty Schmidt farm, which had just been plowed at the time of the survey and offered excellent visibility. Seven prehistoric (7K-C-162 through 168) and one combination prehistoric/historic sites (7K-C-169) were found, with diagnostic artifacts being found on 2 prehistoric sites. Site 7K-C-163, on a one meter rise on the south side of the Leipsic, produced one chert Bare Island-like stemmed point (Plate 3), cores, flakes, and FCR. Site 7K-C-165, on a low rise on the east side of an ephemeral stream, yielded a chert side-notched point, flakes, a core, and FCR. The site containing both prehistoric and historic components, C-169, is located on the southwest slope of a 3 meter rise about 150 meters north of Kent 92. The prehistoric component consisted of one flake tool and about 100 FCR while the historic materials included 5 pieces of lead glazed redware, one porcelain teacup basal fragment, one green glass wine bottle basal fragment, one other hand-blown green glass fragment one hand-blown molded tumbler basal fragment, one cast iron bottle fragment, and numerous glazed brick fragments. The historic assemblage suggests a late eighteenth/early nineteenth century dwelling occupation for this site.

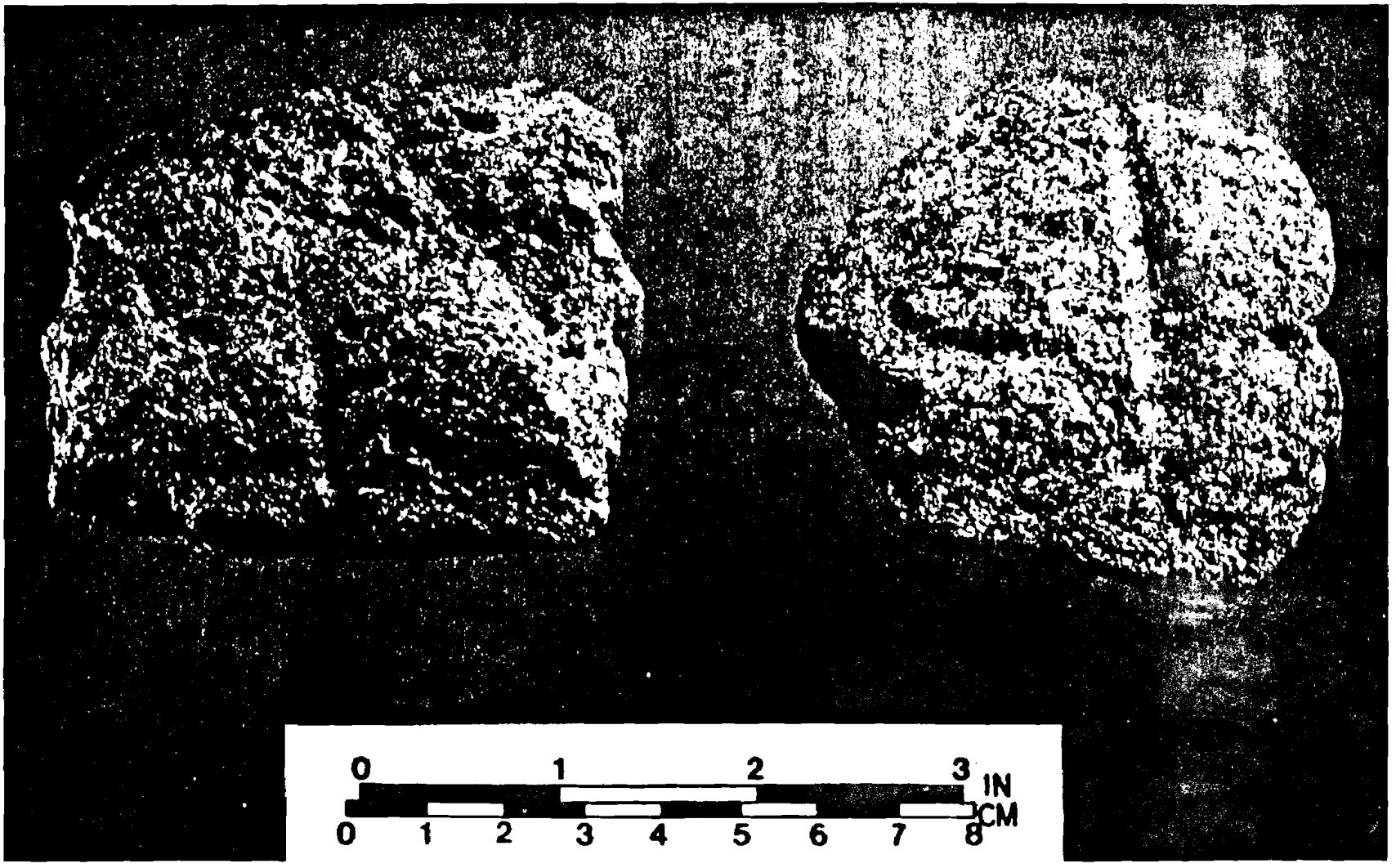
All of the diagnostic prehistoric artifacts from this subarea suggest a Woodland I occupation (3100 B.C. to 850 A.D.) and are typical of micro-band base camp and butchering/processing sites.

Subarea 3-4 This subarea is comprised of farmland on either side of Willis Branch, west of the Conrail tracks and between Kent 92 and Kent 152 (Linberry Road). The north side was in excessive crop growth at the time if the survey and could not be walked, but the south side, which is wholly owned by John and Rusty Schmidt and known as the Linberry Farm, could be surveyed. Although it is a no-till corn field and visibility ranged from 1% - 30%, several sites were located. Diagnostic artifacts were recovered from 7K-C-174 (steatite bowl fragment, Plate 10) and C-179 (quartz contracting stem point). The other nine sites recorded from this farm (C-170-173, 175-178, and 180) all produced low amounts of non-diagnostic tools, debitage, and FCR. This farm suffers from sheet erosion problems and it is quite unlikely that any of these sites would produce intact subsurface features.

Subarea 3-5 This subarea lies along the north side of Garrison's Lake between U.S. 13 and the Conrail tracks and south of Kent 149. It is entirely owned by Joseph Lamberta of Brenford

PLATE 10

Steatite Bowl Fragments from Sites in the Route 13 South Survey



LEFT TO RIGHT: 7K-C-40, 7K-C-174

and offered generally poor visibility (average 2% - 5%) at the time of the survey. Nevertheless, eight sites were identified (7K-C-181 through 188). The only diagnostic artifact recovered was a quartzite Lehigh/Koens-Crispin broadpoint from C-183 (Plate 4). The other 7 sites were all situated on the bluffs along the north side of Garrison's Lake or along tributaries. Site 7K-C-185 is notable in that its limits likely extend far to the west into the woodlot between the identified portion of the site and the tributary. Site C-184 (one red jasper bevel edge scraper/graver and 15 FCR, Plate 11). appears to be almost completely destroyed by a former borrow operation.

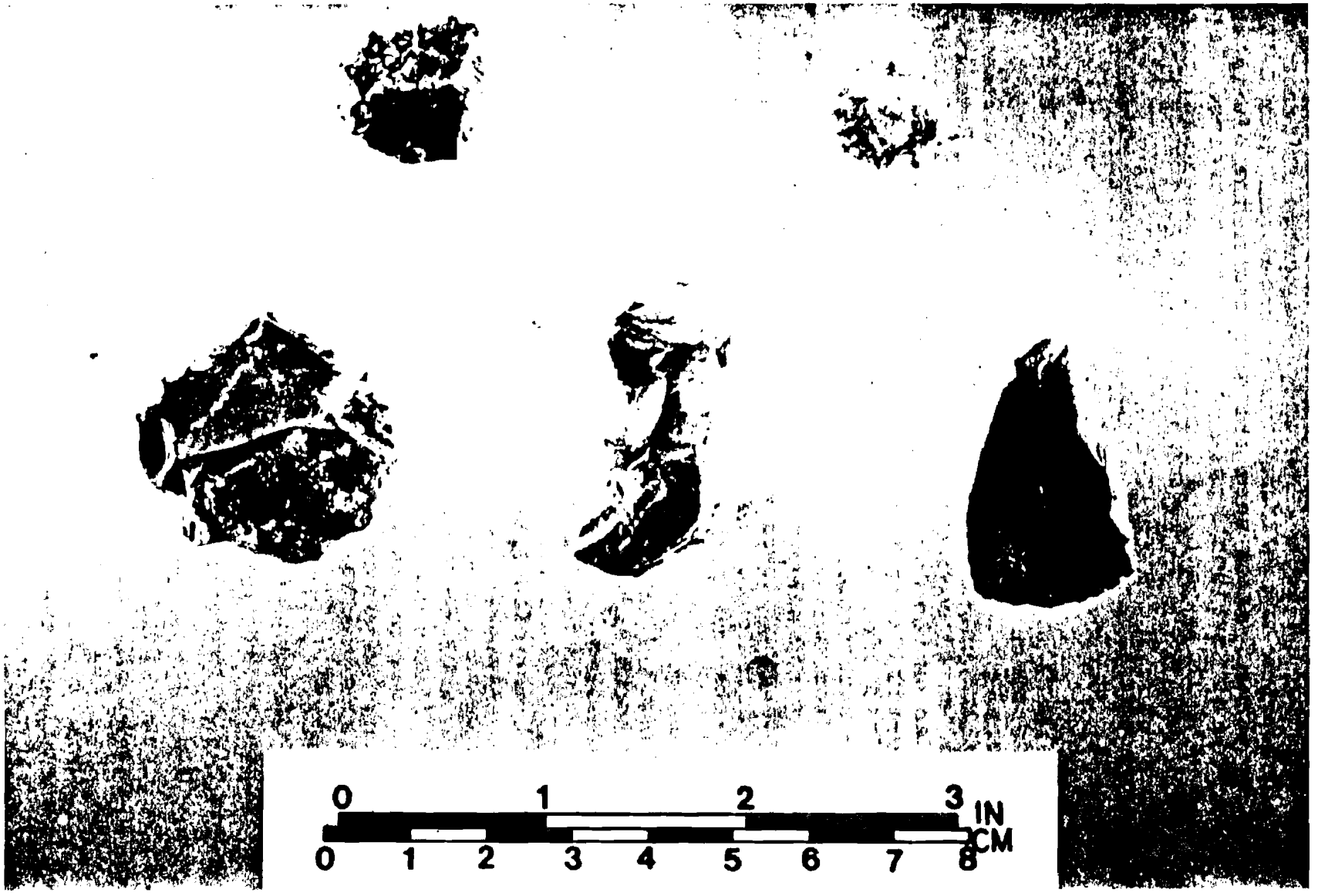
Subarea 3-6 This subarea includes all ground on the south side of Garrison's Lake to Kent 151 and between U.S. 13 and the Conrail tracks. With the exception of a small section northwest of Willis Branch, most of the subarea could not be surveyed due to access denial by the owner. The section northwest of Willis Branch lies on the John Schmidt farm (see also subarea 3-3) and was in no-till corn with low visibility at the time of the survey. Five sites were recorded (7K-C-189 through 193), all of which were scatters of flakes and FCR. However, 191 and 192 were separated from Garrison's Lake by heavy strips of woodlot which historically had never been plowed. Most likely these two sites extend into the unplowed woods and thus, even though the adjacent survey produced only small amounts of debitage, it is possible that artifacts and undisturbed subsurface features exist in the woodlot.

Subarea 3-7 Extending east from U.S. 13 about 1500 meters along the north side of the Leipsic River, this subarea included lands owned by A. Gene Short of Dover and the surface vegetation at the time of the survey was no-till corn with an average visibility of about 1%. Despite this very low visibility, seven sites were recorded (7K-C-194 through 200). All of the sites produced flakes and FCR and were situated on low terraces along the river or on 1 m - 4 m rises along tributaries. Site C-195 produced 2 Killens Ware sherds (Woodland II), a worked chert pebble, 18 flakes and several FCR located in a 1 x 2 meter patch of bare surface on the north side of the Leipsic. This artifact density suggests a very intense prehistoric occupation at this locus. All of the sites in this subarea show minimal erosion and the possibility of intact subsurface features existing here is good.

Subarea 3-8 This subarea is comprised of that land east of U.S. 13 which lies within the triangle formed by the confluence of Alston Branch and the Leipsic River. At the time of the pedestrian survey, the fields were in no-till corn stubble and visibility was less than 1%. Four sites were recorded (7K-C-201 through 204). One non-diagnostic shell-tempered sherd was found at C-201 on a 4-meter high bluff just south of the confluence of the two streams. This and the other three sites all contained small amounts of flakes and FCR but since visibility was so low, no substantive conclusions can be drawn about any of them.

PLATE 11

Selected Unifacial Flake Tools from Sites in the Route 13 South Survey



TOP ROW, left to right: 7K-D-105, 7K-C-184; BOTTOM ROW, left to right: 7K-C-305, 7K-C-18, 7K-C-168

Subarea 3-9 This subarea contains large expanses of farmland on the south side of Alston Branch and the Leipsic River and just downstream from the confluence of the two. Two landowners hold the entire subarea: the western section by Wilmington attorney Donald Booker and a larger eastern section by Wilbur Hesseltine of Townsend. Five sites were found on the former's land and 16 on the latter's and each farm will be discussed separately.

Booker's farm, which is planted by A. Gene Short of Dover, was in no-till soybean stubble at the time of the survey with average visibility of less than one percent. Flakes and FCR were found at sites designated 7K-C-205 through 209.

Hesseltine's farm produced 16 sites on a variety of settings along the Leipsic River and up Alston Branch and three sites deserve special mention. Site C-211 is a long continuous scatter just downstream from the confluence of the two streams. Stretching for about 600 meters along the banks, most artifacts were found within 35 meters of the edge and included one chert bifurcate (Plate 5), 2 argillite stemmed points, 1 ironstone stemmed point, 7 non-diagnostic biface fragments (6 quartz, 1 chalcedony), 1 quartz flake scraper, 20 utilized flakes (3 quartz, 1 ironstone, 11 chert, and 5 jasper), 1 chert core, 1 quartz core, 2 hammerstones (Plate 12), 1 sherd of Townsend plain ceramics, 29 flakes, and 109 FCR. The cultural periods represented extend from the Archaic through the Woodland II and span about 8000 years. The majority of artifacts were found in a concentration at the point at the northernmost part of the site and the entire assemblage suggests base camp types of activities.

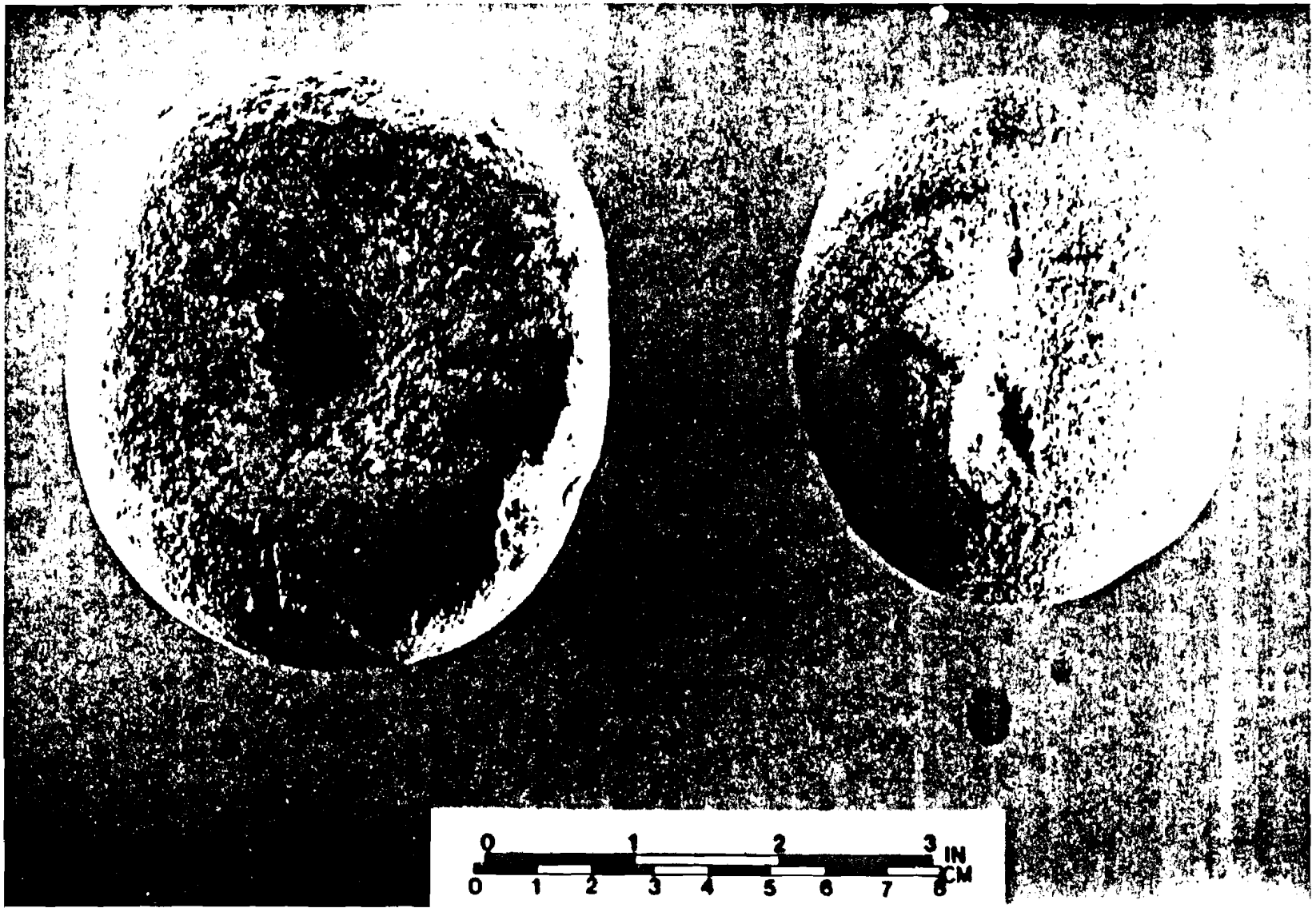
Site C-213 is located up an unnamed tributary to the Leipsic and produced 2 non-diagnostic biface fragments (1 quartz, 1 chert), 1 chert flake tool, 1 unutilized flake, and 8 FCR. It is most likely a small procurement station. Site C-215 contained 40 FCR in a tight scatter about 2 by 5 meters well back from any past or present water course and is probably a plow disturbed hearth or hearths. No associated artifacts were found.

The remaining 13 sites from this farm (7K-C-210, 212, 214, and 216 through 225) produced flakes, FCR, and broken non-diagnostic tools.

Subarea 3-10 Included in this subarea is land on both sides of Alston Branch between U.S. 13 and the Conrail tracks. The south side is owned by Mr. Caleb Boggs of Cheswold and was in rye with an average visibility of 50% at the time of the survey. Four sites were recorded (7K-C-226 through 229) with the first two producing only flakes and FCR, while the latter two contained diagnostics of the Woodland I Period. Site C-228 is located on a 2.5-meter rise between two ephemeral streams to Alston Branch and produced 1 quartz stemmed point (Plate 2), 1 chert early stage biface reject, several utilized flakes and flake tools, 30 flakes, and 35 FCR. Site C-229 is just west of it and lies between ephemeral and flowing tributaries to Alston Branch on a

PLATE 12

Selected Ground Stone Tools from Sites in the Route 13 South Survey



LEFT: anvilstone/muller from 7K-D-73; RIGHT: bi-pitted hammerstone from 7K-C-211

3-meter rise above the floodplain. Recovered were 1 quartz stemmed point (Plate 2), 1 large quartzite lanceolate biface (79 x 35 x 18 mm), 1 quartz biface reject, 1 jasper bevel edge scraper (Plate 13), 3 utilized flakes, 2 non-diagnostic sherds (probably grit-tempered), 80 unutilized flakes and 50 FCR and the assemblage is thought to represent a micro-band base camp.

The northern side of Alston Branch contained one previously recorded site, 7K-C-6, which was walked by the survey team. Two bifaces, one a jasper triangle (Plate 14) and the other a non-diagnostic of quartz, were recovered. Site C-230 produced only 2 utilized flakes, 2 other flakes, and 2 FCR. However, one of the 2 utilized flakes was of an exotic material similar to Flint Ridge, Ohio chalcedony. This material, which occurs on the Delmarva Peninsula during the Adena cultural phase of the Woodland I Period, implies that some sort of trade or exchange network with Ohio Valley peoples was in place at this time. Site C-231, around the head of an ephemeral stream to the Leipsic, produced several non-diagnostic tools, flakes, and FCR, as well as a honey-colored gunflint. The remaining sites found on the north side of Alston Branch, 7K-C-232 through 234, produced only small amounts of flakes and FCR and their function and temporal period is unknown.

Subarea 3-11 This subarea lies on the south side of the Leipsic River and contains diverse water settings, including flowing and ephemeral tributaries and bay/basin features as well as the Leipsic itself. The entire subarea is farmed and consists of well-drained Sassafras soils. The eastern section lies on the Tony Ficner farm while the western section is owned by Charles Dempsey.

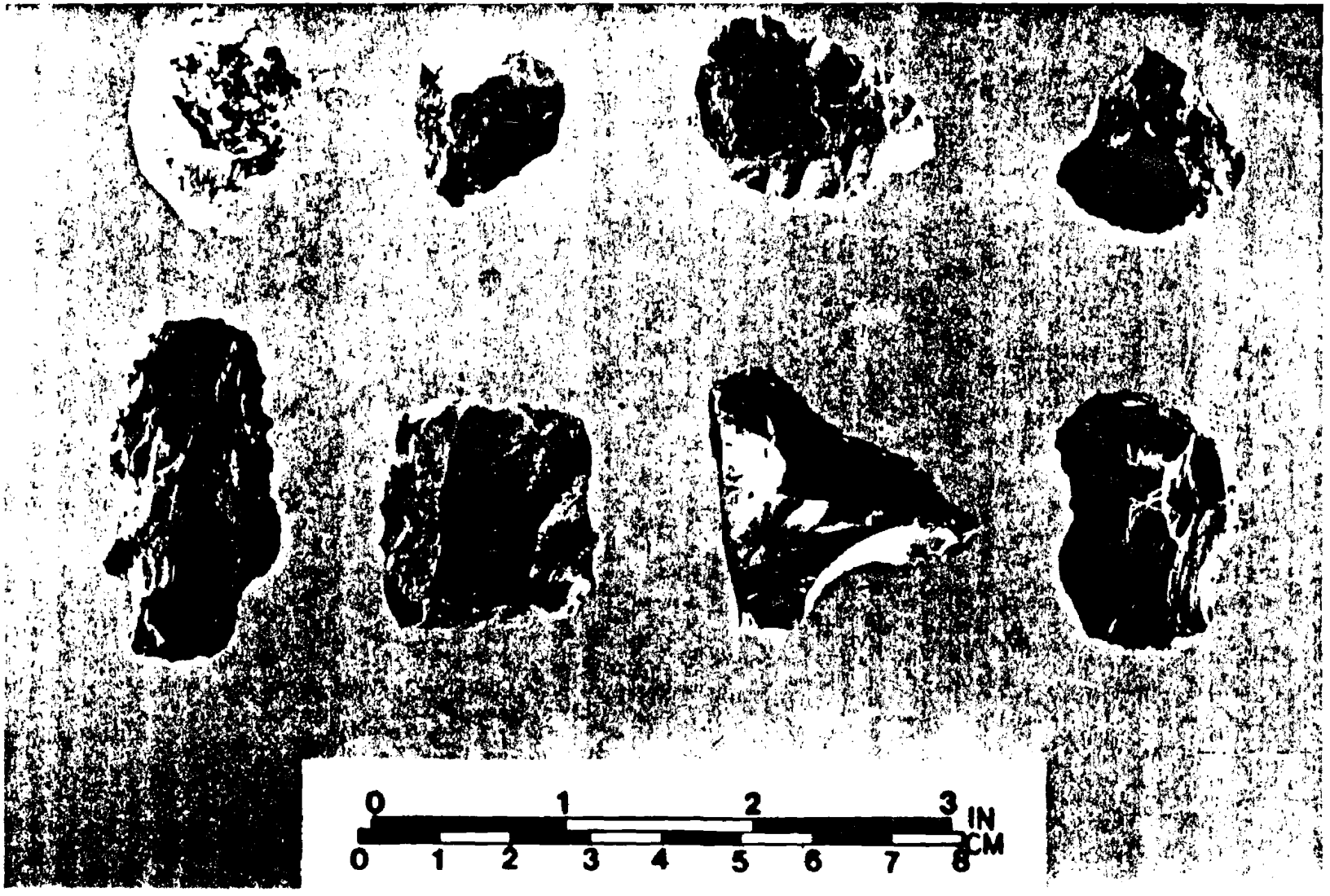
Ficner's farm produced 3 sites (7K-C-235, 236, and 237) on a neck formed by 2 unnamed tributaries to the Leipsic. All were on a very sandy terrace and produced large quantities of debitage and FCR, but no diagnostic artifacts. However, given the low visibility (5%), it is likely that large, intense occupations are present.

Dempsey's farm produced 11 sites in a variety of water settings (7K-C-238 through 248) and 6 of those deserve special mention. Site C-238 lies on the south bank of the Leipsic and is a large site with 2 meter elevation changes over its 400 meter length. It also cut by 2 ephemeral streams. Artifacts found included 1 chert corner-notched point (Plate 3), 1 jasper stemmed point fragment, 1 jasper stemmed biface reject (hump), 3 non-diagnostic split cobble chert bifaces, 5 cores, 25 utilized flakes and flake tools of various materials, 3 non-diagnostic quartz biface fragments, 1 jasper late stage biface reject, just 18 unutilized flakes, and many FCR. Although the debitage count is low, the quantity and variety of artifacts suggests a macro-band base camp function.

Site C-241 is a find reported by a farmhand. It is a grooved ax found some years ago and shows heavy use damage on the

PLATE 13

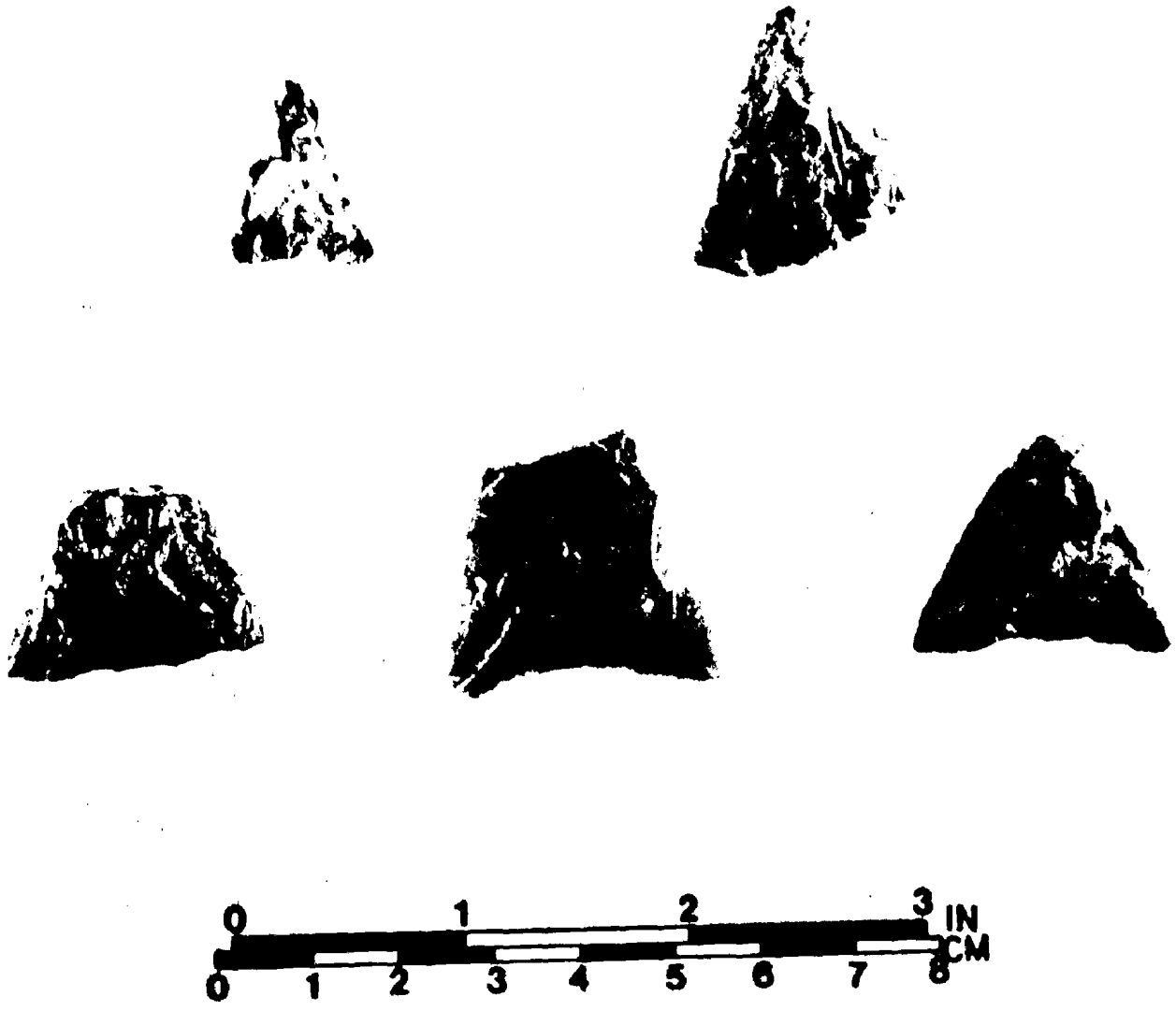
Selected Bifacial Flake Tools from Sites in the Route 13 South Survey



TOP ROW: left to right; 7K-C-229, 7K-D-10, 7NC-J-148, 7K-D-95; BOTTOM ROW, left to right: 7K-C-119, 7K-F-137
7K-C-339, 7K-D-25

PLATE 14

Selected Triangle Points from Sites in the Route 13 South Survey



TOP ROW, left to right: 7K-C-6, 7K-C-322; BOTTOM ROW, left to right: 7K-D-10, 7K-C-249, 7K-C-329

head and bit ends. It was recovered from the north rim of a bay/basin feature which now serves as a livestock pen. Site C-242 lies on a 2 meter rise southeast of the confluence of the Leipsic and an unnamed tributary. Most likely another large macro-band base camp, it produced 9 non-diagnostic biface fragments, 21 utilized flakes, 2 unifacial scrapers, 6 cores, 1 bi-pitted stone, 1 pestle fragment, 2 small friable non-diagnostic ceramic sherds, and 1 chunk of cemented shell deposits resembling a quartzite. The lack of diagnostic bifaces is at least partially explained by a farmhand's assertion that unnamed collectors have periodically walked the farm over the years.

Site C-243 was found on a 3 meter high ridge bounded on the north and south by deep bay/basin features. One chert corner-notched point (Woodland I), 6 utilized flakes, 1 scraper, 2 cores, 72 flakes, and 8 FCR were recovered. Site C-245 also produced a Woodland I diagnostic artifact, a chert contracting stem point, plus a jasper flake tool and 3 flakes.

The source of the cemented shell deposits was determined when the survey team checked the woodlot on the west edge of C-242 to see if it had ever been plowed (it had not). The adjacent bank was also checked for eroding artifacts out of it and three large shards of Wolfe Neck ceramics were found. We also encountered many large (up to 50 kg) slabs of exfoliating cemented shell deposits. A sample of the cemented shell deposits was identified by Dr. Thomas Pickett of the Delaware Geological Survey as a "beach rock" from the Miocene (28-12 million years ago) or Pliocene (12-1 million years ago) Periods, a shoreline shell deposit which has been completely silicified (Pickett, personal communication, 1985). The bank deposition was labeled 7K-C-247, even though it may be an extension of C-242. The remaining sites on the Dempsey farm, 7K-C-239, 240, 241, 244, 246, and 248, produced low amounts of utilized and unutilized flakes, FCR and an occasional broken non-diagnostic tool and are most likely procurement sites.

Subarea 3-12 This is the easternmost of the 12 Leipsic River drainage subareas and is situated on the south bank of the River about 2.5 km northwest of the town of Leipsic. It is composed of 2 parts: a no-till cornfield on the eastern side and a large poorly-drained woodlot on the west. The former was subjected to pedestrian survey, while the latter was the site of three 1x1 meter shovel test units. The field produced 4 sites, the most notable of which is 7K-C-249, a huge, sprawling site along the first terrace on the south side of the River and on a short neck formed by 2 unnamed tributaries to the Leipsic. Although surface visibility on this 12-16 hectare site was only about 3%, literally hundreds of artifacts were found, including 3 stemmed points (1 quartz, 1 chert, 1 argillite), 1 argillite corner-notched point (Plate 3), 1 jasper triangle (Plate 14), 6 broken or rejected biface fragments (5 quartz, 1 red jasper), 10 utilized flakes (8 chert, 1 quartz, 1 argillite), 4 cores, 4 Townsend undecorated sherds, and innumerable flakes and FCR. The site contains both Woodland I and Woodland II components and the

quantity of artifacts recovered given the very low visibility suggests this is not only one of the most extensive, but also one of the most intensively-occupied sites discovered during the 1984-85 Rt. 13 Corridor field seasons.

The other three sites found in this field also deserve some mention. A solitary bay/basin feature well up one of the tributaries mentioned above was also the focus of some prehistoric activity, as 6 FCR were found on its southeast rim (7K-C-250). Two other sites were found on the terraces on the west side of the same tributary. Site C-251 produced one Killens Ware sherd (Woodland II, Plate 6), while C-252 yielded 1 early stage argillite biface, one chunk of unworked argillite, 4 utilized flakes and flake tools, 1 core, 7 flakes, and 15 FCR. These sites are most likely related to the macro-band base camp mentioned above (C-249).

Area 3 - Leipsic Study Area - Subsurface Testing

Figure 26 shows the subsurface tests placed in Area 3 and Appendix VII lists the artifacts recovered from the test units in this area. Three test pits were placed in the woodlot in Subarea 3-12 and all produced prehistoric material which was similar to that found on the surface-collected sites. Site 7K-C-253 was located on the southwest rim of a bay/basin feature and material was found to a depth of 53 cm below the surface. In addition to flakes and FCR, a heavily resharpened teardrop shaped point (Plate 15) was found at about 25 cm below the surface. Although hard evidence is lacking, this style appears to be from the Woodland I Period. Site C-254 was found on the southwest rim of a second bay/basin feature and produced 1 jasper flake and charcoal to a depth of 37 cm. Site C-255 is the designation given to a test unit placed at the confluence of the Leipsic and an unnamed tributary which produced two features and a large quantity of artifacts. See Appendix VI for unit wall profiles of this test unit. Feature 1 was a shallow pit encountered at 17 cm below surface and contained charcoal flakes, FCR, and 16 flakes of gray-green argillite. Numerous argillite flakes were found in the soil matrix around the feature as well, suggesting a living floor or surface. The unit was then taken deeper, with many more argillite flakes being recovered, until about 80 cm below the surface, when a section of another much larger feature was identified. This feature, whose total areal limits are unknown, extended to a depth of 163 cm below the surface, with the sterile underlying sands taken to 173 cm. Material recovered included over 230 flakes, most of which were the same gray-green argillite. Curiously, many unmodified, secondary stage thinning flakes were present. Many of these could have been made into bifaces and other tools but were apparently simply dicarded. This fact suggests that this exotic material (middle Delaware River Valley) may have been quite plentiful on this site, thus making raw material curation unnecessary. It is possible that proximity to water transportation may have made it easier for the prehistoric inhabitants of this area to obtain this material.

FIGURE 26

Subsurface Test Locations – Leipsic Study Area 3

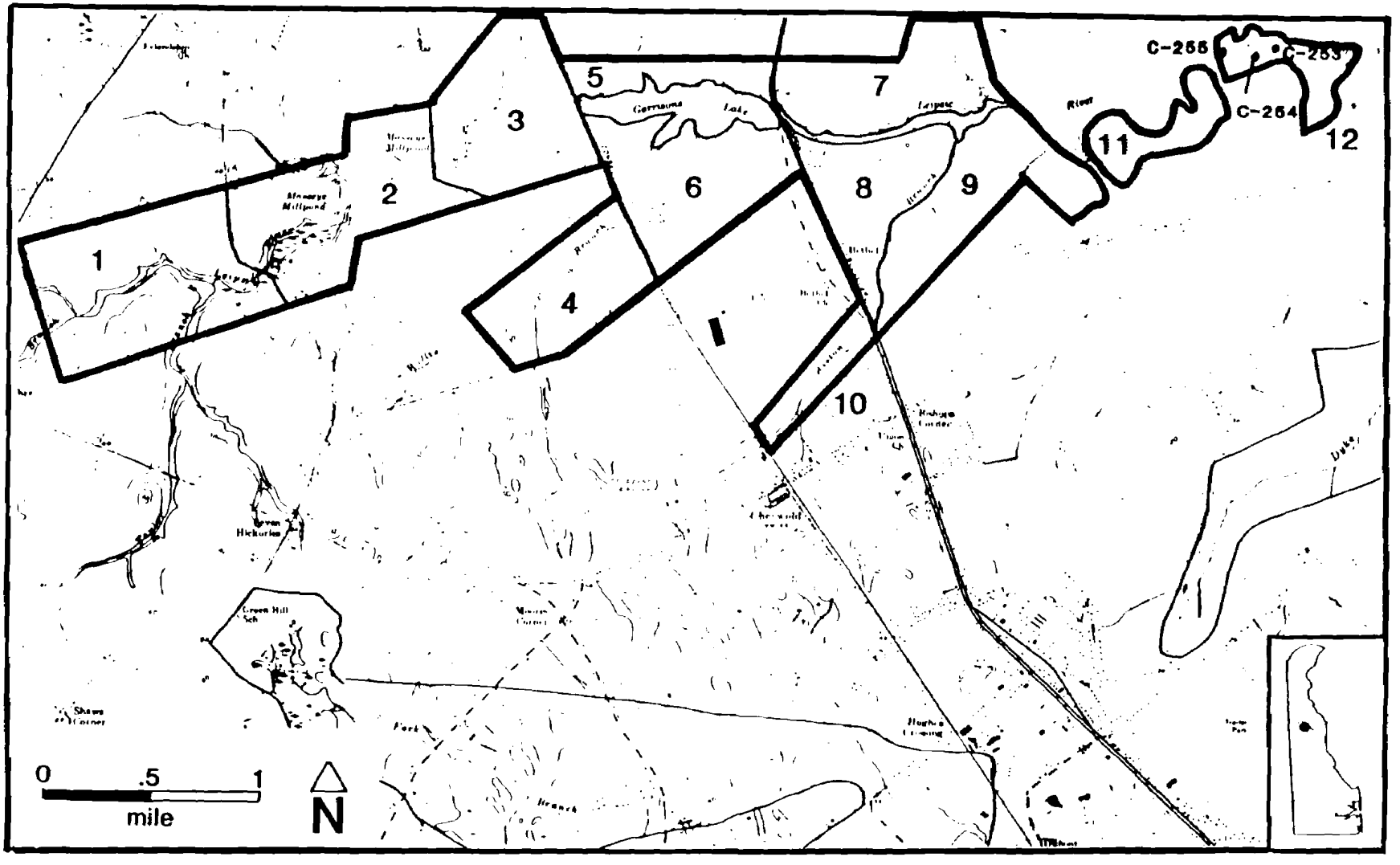
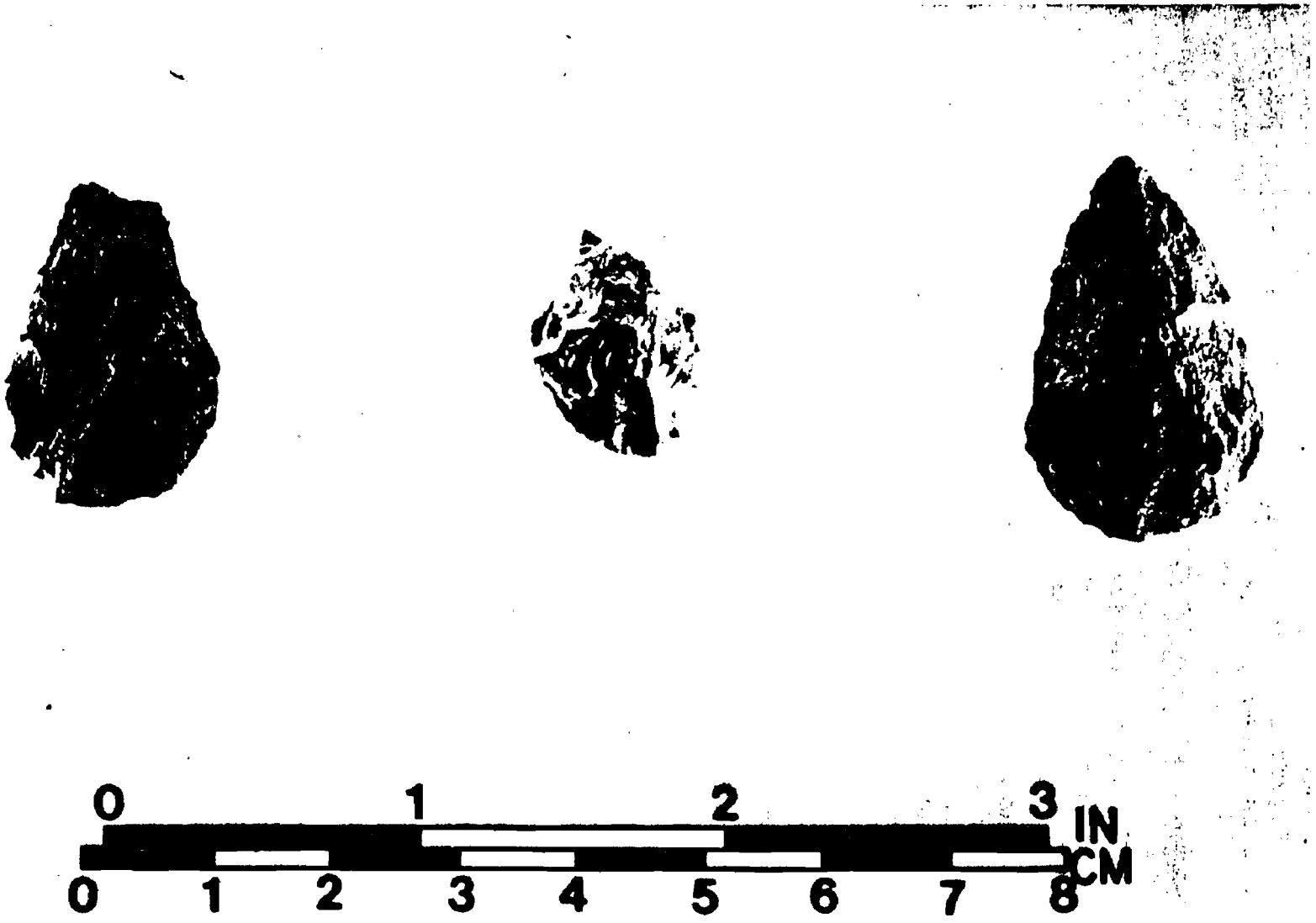


PLATE 15

Selected Teardrop Shaped Bifaces from Sites in the Route 13 South Survey



LEFT TO RIGHT: 7K-C-299, 7K-C-253, 7K-C-299

Area 10 - Dyke and Muddy Branches Study Area - Surface Survey

Figure 27 shows the archaeological sites recorded and the subareas noted in the Dyke and Muddy Branches area. Locational attributes of the sites are listed in Table 6 and cultural historical data in Table 7. This study area was divided into two separate drainages of the Leipsic River: 1) almost all of the length of Dyke Branch southwest of the town of Leipsic, and 2) a portion of Muddy Branch and tributaries on the west side of Delaware 9 between Kent 88/334 and Kent 337. The former includes Subareas 10-1 through 10-5 and the latter 10-6 through 10-9.

Subarea 10-1 This is situated on the northwest side of Dyke Branch, just below its confluence with the Leipsic. Only its northern part could be walked, due to crop growth restrictions, and one historic and four prehistoric sites were encountered. Site C-339 is located on a 3 meter rise at the confluence of Muddy Branch and the Leipsic and measures approximately 200 x 400 meters. Woodland I and II diagnostic artifacts were found, including 2 contracting stem points (Plate 2), 1 possible jasper triangle, 3 non-diagnostic biface fragments, 2 cores, 6 utilized flakes (Plate 13), 1 undecorated Minguannan sherd, 5 flakes, and 49 FCR. Most of the artifacts were concentrated in the southeast corner of the site on a low terrace adjacent to the floodplain.

Site C-340 is situated on a point between two ephemeral streams and produced 1 argillite flake tool, 2 other flakes, and 8 FCR and is probably a small procurement site associated with C-339.

Sites C-341 and 342, upstream from the above two, also produced diagnostic artifacts of the Woodland I Period. The former site, on a point which slopes gently down to the floodplain, produced a large red jasper Fox Creek biface (Plate 1), a chopper, several utilized flakes, FCR, and debitage, while the latter, a 300 meter long scatter on the first terrace above the floodplain, yielded 1 ironstone Poplar Island-like point (Plate 1), 4 biface rejects, 15 utilized flakes and flake tools, 1 large siltstone chopper, 4 cores, debitage, and FCR. Visibility on both of these sites was less than 25%, which limits the assumptions which can be made about them. Nevertheless, it appears that, based upon site areal extent and tool type variety, C-339, C-341, and C-342 are all base camps: 339 and 342 macro-band and 341 a micro-band.

Subarea 10-2 Subarea 10-2 occupies the east bank of Dyke Branch opposite 10-1. Due to crop growth restrictions, only the southern part of the subarea could be walked. The limits of known site 7K-C-94 were extended and 2 other new sites were recorded. The C-94 limits were extended northward along the Dyke Branch floodplain and material recovered included utilized flakes, several non-diagnostic biface rejects, and numerous waste flakes and FCR, but no diagnostic artifacts. The C-353 site is located at the confluence of Dyke Branch and an unnamed minor

FIGURE 27

Sites and Subareas - Dyke and Muddy Branches Study Area 10

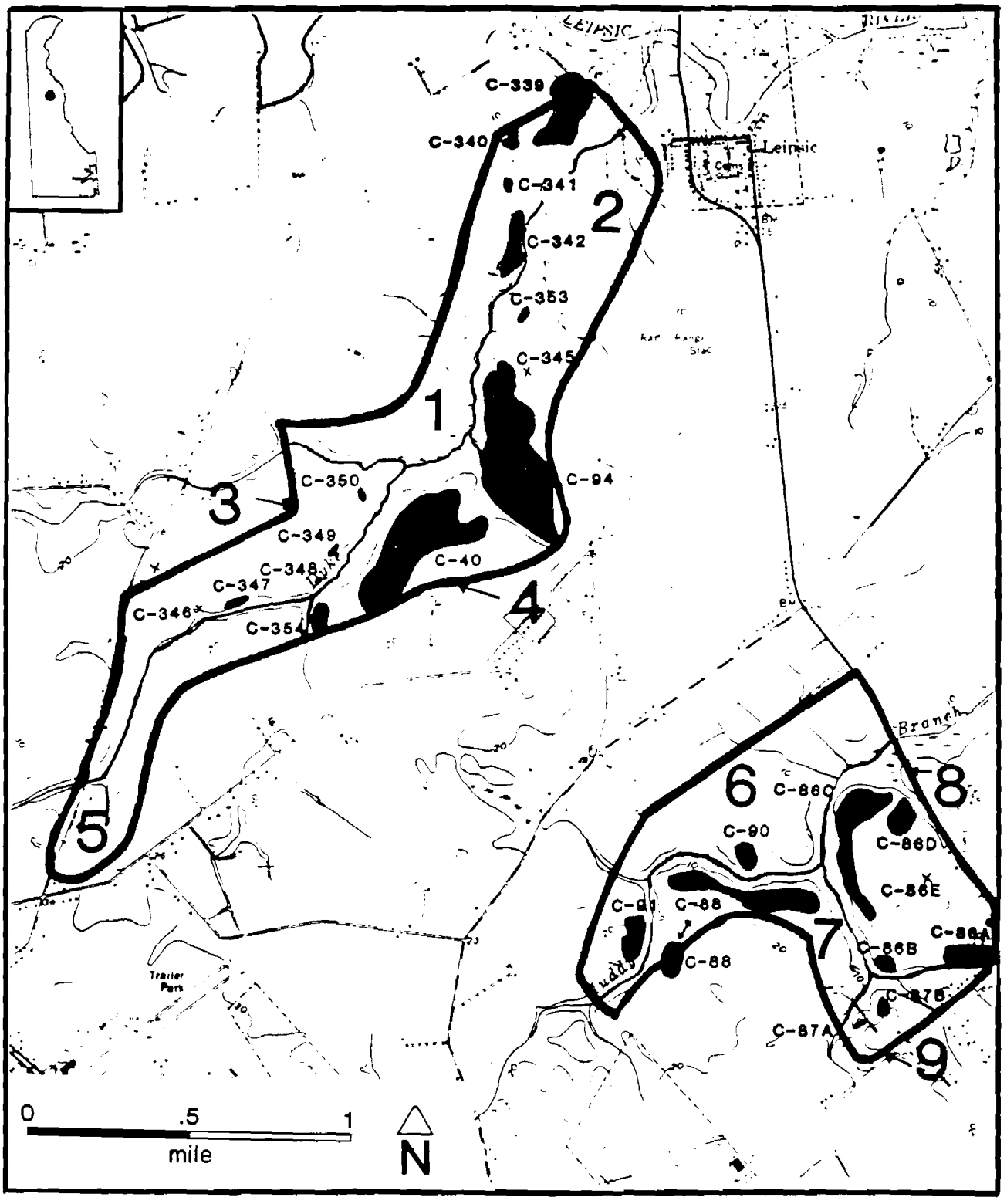


TABLE 6

LOCATIONAL DATA - PREHISTORIC RESOURCES DYKE AND MUDDY BRANCHES STUDY AREA

SITE NUMBER	CRS NUMBER	USGS QUAD	UTM NORTH	UTM EAST	GEOMORPHOLOGICAL SETTING	PRIMARY SOIL SERIES	SECONDARY SOIL SERIES	DRAINAGE	SURFACE WATER SETTING	CONF.	WATER DISTANCE (METERS)	SLOPE	ASPECT	ELEVATION
[illegible]	[illegible]	DOVER	553	361	TERRACE	[illegible]		[illegible]	STREAM	Y	2	2	E	5
[illegible]	[illegible]	DOVER	535	351	TERRACE	[illegible]	[illegible]	[illegible]	STREAM	Y	1	2	SE	5
[illegible]	[illegible]	DOVER	532	349	TERRACE	[illegible]		[illegible]	STREAM	Y	1	0	E	5
[illegible]	[illegible]	DOVER	512	350	TERRACE	[illegible]	[illegible]	[illegible]	STREAM	Y	1	2	E	5
[illegible]	[illegible]	DOVER	479	349	TERRACE	[illegible]		[illegible]	STREAM	Y	1	2	W	5
[illegible]	[illegible]	DOVER	455	333	TERRACE	[illegible]		[illegible]	STREAM	Y	1	0	NEW	12
[illegible]	[illegible]	DOVER	487	355	BLUFF	[illegible]		[illegible]	STREAM	N	1	2	N	10
[illegible]	[illegible]	DOVER	459	297	TERRACE	[illegible]		[illegible]	STREAM	Y	1	2	S	10
[illegible]	[illegible]	DOVER	441	296	TERRACE	[illegible]		[illegible]	STREAM	N	1	2	S	10
[illegible]	[illegible]	DOVER	445	311	TERRACE	[illegible]		[illegible]	STREAM	Y	1	0	S	10
[illegible]	[illegible]	DOVER	452	314	TERRACE	[illegible]		[illegible]	STREAM	N	1	2	SE	10
[illegible]	[illegible]	DOVER	458	319	TERRACE	[illegible]		[illegible]	STREAM	N	1	2	SE	10
[illegible]	[illegible]	DOVER	463	319	TERRACE	[illegible]	[illegible]	[illegible]	STREAM	Y	1	0	E	10
[illegible]	[illegible]	DOVER	450	201	BLUFF	[illegible]		[illegible]	NONE	N	0	2	NA	25
[illegible]	[illegible]	DOVER	448	353	TERRACE	[illegible]		[illegible]	STREAM	Y	1	2	N	5
[illegible]	[illegible]	DOVER	436	312	TERRACE	[illegible]	[illegible]	[illegible]	STREAM	Y	1	0	W	10

TABLE 7

CULTURAL - HISTORICAL DATA - DYKE AND MUDDY BRANCHES STUDY AREA

SITE NUMBER	PALEO	ARCHAIC	WOODLAND I	WOODLAND II	CE	AE	WN	CH	WE	UA	DP	SI	MG	HISTORIC	BIFACE	SCRAPER	FLAKE TOOL	CORE	FLAKES	GROUND STONE TOOL	FCR	CERAMICS
[illegible]			Y	Y									Y	Y	Y		Y	Y	Y		Y	Y
[illegible]																	Y		Y		Y	
[illegible]			Y											Y	Y		Y	Y	Y		Y	
[illegible]			Y												Y		Y	Y	Y		Y	
[illegible]			Y	Y		Y	Y			Y					Y	Y	Y		Y	Y	Y	Y
[illegible]				Y									Y						Y		Y	Y
[illegible]																			Y			
[illegible]																					Y	
[illegible]														Y			Y		Y		Y	
[illegible]																					Y	
[illegible]																			Y			
[illegible]																					Y	
[illegible]																			Y		Y	
[illegible]																			Y		Y	
[illegible]			Y	Y											Y		Y	Y	Y	Y	Y	
[illegible]																	Y	Y			Y	
[illegible]			Y	Y		Y	Y	Y				Y			Y	Y	Y		Y			Y
[illegible]	Y	Y	Y	Y	Y	Y	Y	Y				Y	Y		Y	Y			Y	Y		Y
[illegible]	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y		Y	Y	Y	Y	Y	Y		Y
[illegible]			Y	Y								Y			Y		Y		Y		Y	
[illegible]			Y												Y							
[illegible]			Y	Y		Y	Y					Y			Y		Y		Y			Y
[illegible]			Y	Y	Y		Y					Y	Y		Y	Y	Y		Y			Y
* [illegible]			Y				Y								Y	Y	Y		Y			
[illegible]			Y			Y		Y							Y	Y	Y	Y				Y
[illegible]	Y	Y	Y	Y		Y	Y	Y	Y			Y			Y		Y	Y	Y	Y		Y
[illegible]	Y	Y	Y	Y		Y						Y			Y	Y	Y		Y	Y		
[illegible]	Y	Y	Y	Y		Y	Y	Y	Y			Y			Y	Y	Y	Y	Y	Y		Y
[illegible]	Y	Y	Y	Y		Y	Y	Y				Y			Y	Y	Y	Y	Y	Y		Y
[illegible]			Y	Y		Y						Y			Y		Y		Y	Y		Y
[illegible]		Y	Y	Y		Y						Y			Y		Y		Y	Y		
* [illegible]	Y		Y	Y		Y	Y					Y			Y	Y	Y	Y	Y			Y
** [illegible]			Y	Y				Y	Y			Y			Y	Y	Y		Y	Y		Y
* [illegible]	Y	Y	Y	Y		Y						Y			Y	Y	Y		Y	Y		Y
** [illegible]			Y	Y		Y	Y	Y	Y	Y		Y	Y		Y	Y						Y

Notes: * Mapped on Figure 32, although outside any Long Little River/Cape Fle Branch Study Area. See Appendix I.

** Not mapped; located well outside any study area. See Appendix I.

tributary. Recovered were 1 Minguannan cord-marked sherd (Woodland I, Plate 6), 1 flake, and 11 FCR. However, visibility was very low (1%) and it is likely that much of the site is obscured by an adjacent fallow field as well. Given the poor surface conditions, it is entirely possible that a large site exists here. The final site in this field, C-345, was a scatter of chert flakes located on an ephemeral stream well up from its confluence with Dyke Branch (visibility also extremely low).

Subarea 10-3 This entire subarea contains one large farm, which was no-till corn and offered very poor visibility at the time of the survey. Seven sites were recorded (7K-C-346 through 352), all of which contained small amounts of flakes and FCR.

Subarea 10-4 This subarea, comprised entirely of a portion of the Millard Dixon farm, contains one known site (7K-C-40) and another smaller site to the southwest of it (C-354). The limits of the C-40 site were greatly expanded and the site as presently defined covers about 4 hectares. It occupies a broad point at the confluence of Dyke Branch and an unnamed tributary and is directly southwest of the C-94 site. Diagnostic artifacts found included a jasper Bare Island-like stemmed point and a steatite bowl fragment (Plate 10) (both Woodland I), and a jasper triangle point (Woodland II). Also recovered were numerous early stage biface rejects, utilized flakes, cores, hammerstones, debitage, and FCR, some of which occurred in clusters signifying plowed out hearths. The site is presumed to be a macro-band base camp.

The C-354 site is situated southeast of the confluence of Dyke Branch and a second unnamed minor tributary and contained only 1 utilized flake, 1 core, 20 FCR, and a three kilogram slab of argillite with minimal working.

Subarea 10-5 Vegetation restrictions prevented any pedestrian survey in this subarea.

Subarea 10-6 and 10-7 These subareas contain entirely no-till corn or tilled fields with excessive crop growth and offered no opportunities for pedestrian survey. Subarea 6 contains previously recorded sites 7K-C-90 and C-91, while Subarea 7 contains site C-88. See Appendix II (Leitzinger/Chapman collection) for a detailed description of surface collected artifacts from these sites.

Subarea 10-8 This subarea is composed entirely of one large potato field on the south side of Muddy Branch which is bounded by several other minor unnamed tributaries. The field had been extensively surface-collected by Andrew Leitzinger and Christopher Chapman of Dover and these gentlemen had previously recorded three sites from it: 7K-C-86A, 86B and 86C. Mr. Leitzinger kindly allowed us to catalogue their combined collections and also conducted the UDCAR survey crew on a personal pedestrian survey of this field to show us the locations of these sites. During the pedestrian survey, additional artifacts were collected from the three aforementioned sites and

two new sites were recorded (7K-C-86D and 7K-C-86E). One thin steatite bowl fragment and an argillite flake were found at C-86C, while flakes and FCR were visible at C-86A and C-86B. See Appendix II for a detailed discussion of the Leitzinger/Chapman collection from these sites.

The 7K-C-86D site is located just east of the C-86C site along the west side of an unnamed tributary to Muddy Branch. Covering about 1.6 hectares, it sits on a rise about 2 meters above the floodplain. Recovered were one Woodland I jasper stemmed point, one Woodland II chert triangular point, utilized flakes, FCR, and debitage. Site 7K-C-86E was found in the middle of the field on the crest of a 3 meter high ridge and produced only a single jasper corner-notched point in an area of very low surface visibility.

Subarea 10-9 This small subarea lies at the confluence of three minor tributaries to Muddy Branch and was entirely fallow field at the time of survey. However, Andrew Leitzinger of Dover had previously surface collected the fields and had recorded sites 7K-C-87A and 87B with the BAHP in Dover. See Appendix II for a detailed description of his finds from these two sites.

Area 6 - Hughes Crossing Study Area - Surface Survey

Figure 28 shows the archaeological sites recorded and the subareas noted in the Hughes Crossing area. Locational attributes of the sites are listed in Table 8 and cultural historical data in Table 9. This area encompasses sections of the Mudstone and Fork Branch drainages of the St. Jones River northwest of Dover. Land surfaces rise 2 to 4 meters above the stream floodplains and occasional poorly-drained swamps can be found at the heads of minor tributaries feeding Fork and Mudstone Branches. The low spots are usually wooded and historically unplowed, but overall most of the area is in cultivation. Soils are of the Sassafras-Fallsington association, with the majority of the prehistoric locations being found on well-drained Sassafras loam and sandy loam.

Subarea 6-1 This subarea is bounded by Kent 168 on the northwest, Kent 101 on the southeast, Kent 167 on the southwest and an arbitrary line on the northeast. Included is a portion of Fork Branch and all of an unnamed tributary and is about one-third wooded. Ten surface sites and one large private collection were recorded during the pedestrian survey and five of seven test units also produced prehistoric remains.

The Sonny Ridgeway farm lies at the northern end of the subarea along Kent 168 and was walked in February, 1985 when field visibility was about 70%. The farm contains several dry bay/basins and all 8 sites found in the field were either on the rims or inside of these features. Very few artifacts were found at each site but several diagnostic artifacts were recovered. Site 7K-C-256 produced 1 rhyolite stemmed point fragment and a jasper core; C-257 an argillite broadspear (Plate 4) and a jasper

FIGURE 28

Sites and Subareas – Hughes Crossing Study Area 6

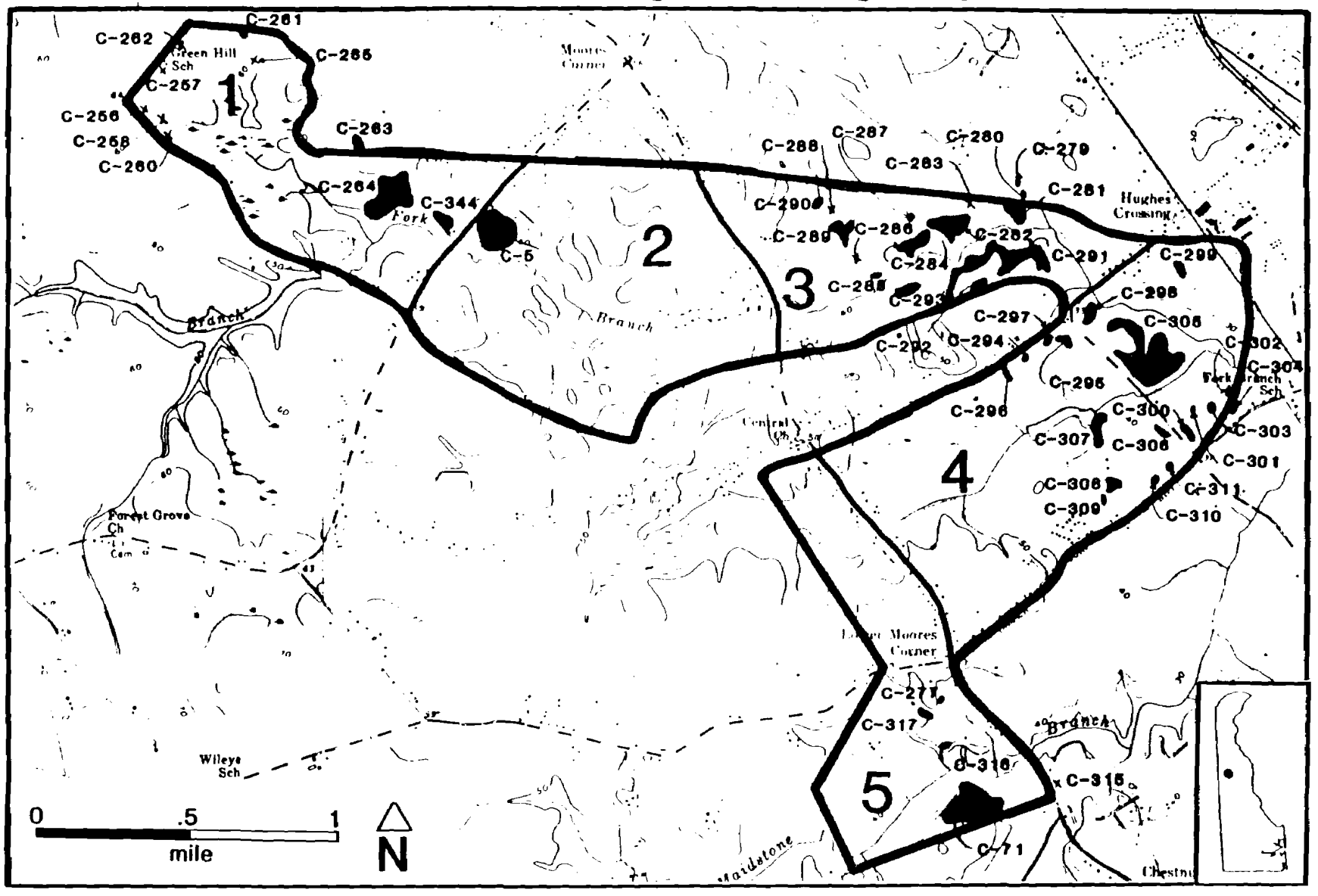


TABLE 8

LOCATIONAL DATA - PREHISTORIC RESOURCES - HUGHES CROSSING STUDY AREA

SITE NUMBER	CRS NUMBER	USGS QUAD	UTM NORTH	UTM EAST	GEOMORPHOLOGICAL SETTING	PRIMARY SOIL SERIES	SECONDARY SOIL SERIES	DRAINAGE	SURFACE WATER SETTING	CONF.	WATER DISTANCE (METERS)	SLOPE	ASPECT	ELEVATION
7K-F-256	K-6137	LITTLE CREEK	380	409	LOW TERRACE	SaB	SaA	ST. JONES	STREAM	N	5	2	N	6
7K-F-257	K-6138	KENTON	360	413	RISE	SaA	SaB	ST. JONES	STREAM	N	0	2		60
7K-F-258	K-6139	KENTON	376	413	LOW TERRACE	W		ST. JONES	STREAM	N	3	2		60
7K-F-259	K-6140	KENTON	381	417	RISE	SaB		ST. JONES	STREAM	N	0	2		60
7K-F-260	K-6141	KENTON	372	415	RISE	SaB	Wo	ST. JONES	STREAM	N	6	2		60
7K-F-261	K-6142	KENTON	398	429	RISE	SaB	Wo	ST. JONES	STREAM	N	0	2		60
7K-F-262	K-6143	KENTON	392	417	RISE	SaB	Wo	ST. JONES	STREAM	N	0	2		60
7K-F-266	K-6147	KENTON	370	411	RISE	SaB	Fs	ST. JONES	STREAM	N	1	4	N	60
7K-F-267	K-6148	KENTON	375	427	RISE	SaB	W	ST. JONES	STREAM	N	0	4	N	63
7K-F-268	K-6149	KENTON	381	433	RISE	SaB		ST. JONES	STREAM	N	1	3	N	60
7K-F-269	K-6150	KENTON	374	424	RISE	SaB	Wo	ST. JONES	STREAM	N	0	2	N	60
7K-F-270	K-6151	KENTON	375	435	RISE	SaB		ST. JONES	STREAM	Y	1	2	N	60
7K-F-263	K-6144	KENTON	370	[illegible]	RISE	SaB		ST. JONES	STREAM	N	2	2	NE	62
7K-F-264	K-6145	DOVER	361	15	TERRACE	SaB	Fs	ST. JONES	STREAM	Y	0	2	S	60
7K-F-265	K-6146	DOVER	354	27	TERRACE	SaB		ST. JONES	STREAM	N	3	4	SW	20
7K-F-221	K-6152	DOVER	318	63	TERRACE	SaB		ST. JONES	STREAM	N	0	2	S	52
7K-F-222	K-6153	DOVER	326	59	TERRACE	SaB		ST. JONES	STREAM	N	1	2	NW	50
7K-F-223	K-6154	DOVER	337	53	TERRACE	Fs		ST. JONES	STREAM	Y	2	0	E	50
7K-F-224	K-6155	DOVER	331	49	TERRACE	Fs		ST. JONES	STREAM	Y	3	0	S	50
7K-F-225	K-6156	DOVER	342	40	TERRACE	SaB		ST. JONES	STREAM	N	1	2	SE	45
7K-F-226	K-6157	DOVER	339	60	TERRACE	KeB	Wo	ST. JONES	STREAM	Y	2	2	S	50
7K-F-228	K-6159	DOVER	338	66	RISE	SaB		ST. JONES	STREAM	N	1	2	W	50
7K-F-229	K-6160	DOVER	363	155	TERRACE	SaB		ST. JONES	STREAM	N	1	2	E	50
7K-F-280	K-6161	DOVER	359	156	TERRACE	SaB		ST. JONES	STREAM	Y	1	2	E	50
7K-F-281	K-6162	DOVER	357	153	RISE	SaB		ST. JONES	STREAM	Y	2	2	S	60
7K-F-282	K-6163	DOVER	354	140	TERRACE	SaB	SaB	ST. JONES	STREAM	Y	1	2	W	40
7K-F-283	K-6164	DOVER	357	144	TERRACE	SaB		ST. JONES	STREAM	N	1	2	W	40
7K-F-284	K-6165	DOVER	350	131	TERRACE	SaB		ST. JONES	STREAM	Y	1	2	S	40
7K-F-285	K-6166	DOVER	344	123	TERRACE	SaA		ST. JONES	STREAM	Y	1	0	S	40
7K-F-286	K-6167	DOVER	347	119	TERRACE	SaB		ST. JONES	STREAM	N	0	2	W	40
7K-F-288	K-6169	DOVER	367	115	TERRACE	SaB		ST. JONES	STREAM	N	6	2	W	45
7K-F-289	K-6170	DOVER	355	116	TERRACE	Fs	SaB	ST. JONES	STREAM	N	0	4	W	46
7K-F-290	K-6171	DOVER	366	111	RISE	SaB		ST. JONES	STREAM	N	1	2	W	45
7K-F-291	K-6172	DOVER	347	150	TERRACE	SaB		ST. JONES	STREAM	N	2	2	N	40
7K-F-292	K-6173	DOVER	341	146	RISE	SaB	Fs	ST. JONES	STREAM	N	0	2	N	40
7K-F-293	K-6174	DOVER	343	139	TERRACE	SaB		ST. JONES	STREAM	Y	2	2	N	40
7K-F-294	K-6175	DOVER	326	155	RISE	SaB		ST. JONES	STREAM	N	4	2	W	32
7K-F-295	K-6176	DOVER	328	164	RISE	SaB		ST. JONES	STREAM	N	2	2	W	38
7K-F-296	K-6177	DOVER	322	150	TERRACE	SaB	Fs	ST. JONES	STREAM	N	0	2	W	30
7K-F-297	K-6178	DOVER	320	140	TERRACE	Fs		ST. JONES	STREAM	N	0	0	E	30
7K-F-298	K-6179	DOVER	333	169	BLUFF	SaB		ST. JONES	STREAM	N	2	2	N	45
7K-F-299	K-6180	DOVER	344	189	RISE	SaB		ST. JONES	STREAM	N	1	2	S	30
7K-F-300	K-6181	DOVER	309	191	RISE	SaB		ST. JONES	STREAM	N	1	2	E	28
7K-F-301	K-6182	DOVER	315	193	RISE	SaB	Wo	ST. JONES	STREAM	N	0	2	S	30
7K-F-302	K-6183	DOVER	318	200	TERRACE	SaB	SaB	ST. JONES	STREAM	Y	4	2	N	30
7K-F-303	K-6184	DOVER	314	196	TERRACE	SaC2	SaB	ST. JONES	STREAM	N	1	5	S	40
7K-F-304	K-6185	DOVER	314	201	RISE	SaC2	SaB	ST. JONES	STREAM	N	0	5	S	40

TABLE 8 (cont.)

LOCATIONAL DATA - ARCHAEOLOGICAL RESOURCES - HUGHES CROSSING STUDY AREA

SITE NUMBER	LFS NUMBER	USGS QUAD	UTM NORTH	UTM EAST	GEOMORPHOLOGICAL SETTING	PRIMARY SOIL SERIES	SECONDARY SOIL SERIES	DRAINAGE	SURFACE WATER SETTING	CONF.	WATER DISTANCE (METERS)	SLOPE	ASPECT	ELEVATION
7K-1-505	K-6186	DOVER	325	105	TERRACE	[illegible]	[illegible]	ST. JOHNS	STREAM	Y	1	2	N	40
7K-1-506	K-6187	DOVER	308	136	TERRACE	[illegible]	[illegible]	ST. JOHNS	STREAM	N	3	2	S	30
7K-1-507	K-6188	DOVER	309	171	TERRACE	[illegible]	[illegible]	ST. JOHNS	STREAM	Y	0	2	W	40
7K-1-508	K-6189	DOVER	298	175	RISE	[illegible]	[illegible]	ST. JOHNS	STREAM	N	1	2	E	35
7K-1-509	K-6190	DOVER	295	172	TERRACE	[illegible]	[illegible]	ST. JOHNS	STREAM	N	3	2	E	30
7K-1-510	K-6191	DOVER	299	189	RISE	[illegible]	[illegible]	ST. JOHNS	STREAM	N	4	2	N	30
7K-1-511	K-6192	DOVER	301	197	RISE	[illegible]	[illegible]	ST. JOHNS	STREAM	N	2	2	E	35
7K-1-512	K-6193	DOVER	334	189	BLUFF	[illegible]	[illegible]	ST. JOHNS	STREAM	N	1	2	S	35
7K-1-513	K-6194	DOVER	336	193	BLUFF	[illegible]	[illegible]	ST. JOHNS	STREAM	N	1	2	S	35
7K-1-514	K-6195	DOVER	329	201	BLUFF	[illegible]	[illegible]	ST. JOHNS	STREAM	Y	1	2	S	35
7K-1-515	K-6196	DOVER	235	160	RISE	[illegible]		ST. JOHNS	STREAM	N	6	5	N	40
7K-1-516	K-6197	DOVER	243	137	TERRACE	[illegible]		ST. JOHNS	STREAM	Y	5	2	S	40
7K-1-517	K-6198	DOVER	249	131	TERRACE	[illegible]		ST. JOHNS	STREAM	N	7	2	E	40
7K-1-518	K-6199	DOVER	252	136	TERRACE	[illegible]		ST. JOHNS	STREAM	N	2	2	E	40

TABLE 4

CULTURAL RESOURCE DATA HUGHES CROSSING STUDY AREA

SITE NUMBER	PALEO	ARCHAIC	WOODLAND I	WOODLAND II	[illegible]	HISTORIC	BIFACE	SCRAPER	FLAKE TOOL	CORE	FLAKES	GROUND STONE TOOL	POT	CERAMICS
[illegible]							Y			Y				
[illegible]			Y				Y							
[illegible]			Y				Y		Y					
[illegible]													Y	
[illegible]							Y		Y					
[illegible]						Y							Y	
[illegible]											Y	Y	Y	
[illegible]							Y		Y		Y	Y	Y	
[illegible]		Y	Y								Y		Y	
[illegible]									Y		Y			
[illegible]									Y		Y		Y	
[illegible]									Y		Y			
[illegible]									Y		Y			
[illegible]							Y		Y		Y			
[illegible]							Y		Y	Y	Y			
[illegible]											Y		Y	
[illegible]							Y				Y			
[illegible]						Y					Y			Y
[illegible]									Y		Y		Y	Y
[illegible]									Y					
[illegible]											Y			
[illegible]									Y		Y		Y	
[illegible]			Y				Y	Y			Y		Y	
[illegible]								Y	Y	Y	Y		Y	
[illegible]									Y					
[illegible]									Y	Y				
[illegible]									Y					
[illegible]							Y		Y	Y	Y	Y	Y	
[illegible]			Y						Y		Y		Y	
[illegible]							Y		Y		Y			
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[illegible]							Y		Y		Y		Y	
[illegible]							Y						Y	
[illegible]							Y						Y	
[illegible]													Y	
[illegible]													Y	
[illegible]											Y		Y	
[illegible]							Y		Y		Y		Y	
[illegible]	Y		Y		Y		Y				Y		Y	
[illegible]													Y	
[illegible]									Y	Y	Y		Y	
[illegible]									Y				Y	
[illegible]							Y			Y			Y	
[illegible]							Y	Y	Y	Y	Y	Y	Y	
[illegible]		Y	Y						Y		Y		Y	
[illegible]													Y	
[illegible]						Y	Y						Y	

TABLE ? (cont.)

CULTURAL HISTORICAL DATA HUGHES CROSSING STUDY AREA

SITE NUMBER	PALEO	ARCHAIC	WOODLAND I	WOODLAND II	CE	IN	WN	CA	WB	DN	PE	SE	MG	HISTORIC	BIFACE	SCRAPER	FLAKE TOOL	CORE	FLAKES	GROUND STONE TOOL	FCR	CERAMICS
[illegible] 309																		Y			Y	
[illegible] 310																			Y		Y	
[illegible] 311																			Y		Y	
[illegible] 312		Y	Y												Y				Y		Y	
[illegible] 313			Y	Y			Y						Y		Y	Y	Y		Y		Y	Y
[illegible] 314				Y											Y		Y		Y		Y	
[illegible] 315				Y											Y							
[illegible] 316																			Y		Y	
[illegible] 317																					Y	
[illegible]																	Y					

biface fragment; C-258 a very well made jasper lanceolate biface, a jasper flake tool, and 1 FCR; and C-260 a contracting stem jasper biface, a jasper discoidal ESBR, and a jasper pebble flake tool. Another site, C-265, also produced rhyolite debitage. The lithic preferences are clearly for either a high-grade cryptocrystalline or the exotic materials rhyolite and argillite. These materials are frequently seen on Woodland I sites of 2000 - 1000 B.C. The other two prehistoric sites found on this farm, C-259 and 262, are FCR scatters. An historic artifact scatter, C-261 (K-6142), was found on the berm of a ridge about 400 meters east of Green Hill Mennonite School and 250 meters southeast of Kent 168. Presently, no farm lanes or modern roads pass anywhere near this location, which contained a brick scatter and nineteenth century ceramics over several square meters. Byles' 1859 Atlas of Kent County and Beers' 1868 Atlas of Delaware indicated no structures were present in this spot at those times.

To the east of this woods lies the Leroy Yoder farm, which was also surveyed and produced two sites, 7K-C-263 and 264. Site C-263 is a small artifact scatter on a slight rise on the northeast side of an ephemeral stream to Fork Branch and yielded a hammerstone, a quartz flake tool, and 5 FCR. A much larger site is C-264, which lies at the confluence of two ephemeral streams and Fork Branch. Covering about 2.5 hectares, it produced 1 rhyolite Kirk point (Plate 16), 3 stemmed points (1 argillite, 1 quartz, 1 chert; Plate 2), several non-diagnostic bifaces, plus scrapers, flake tools, a pecked quartz cobble, flakes, and FCR. A Woodland I base camp is suggested by this assemblage.

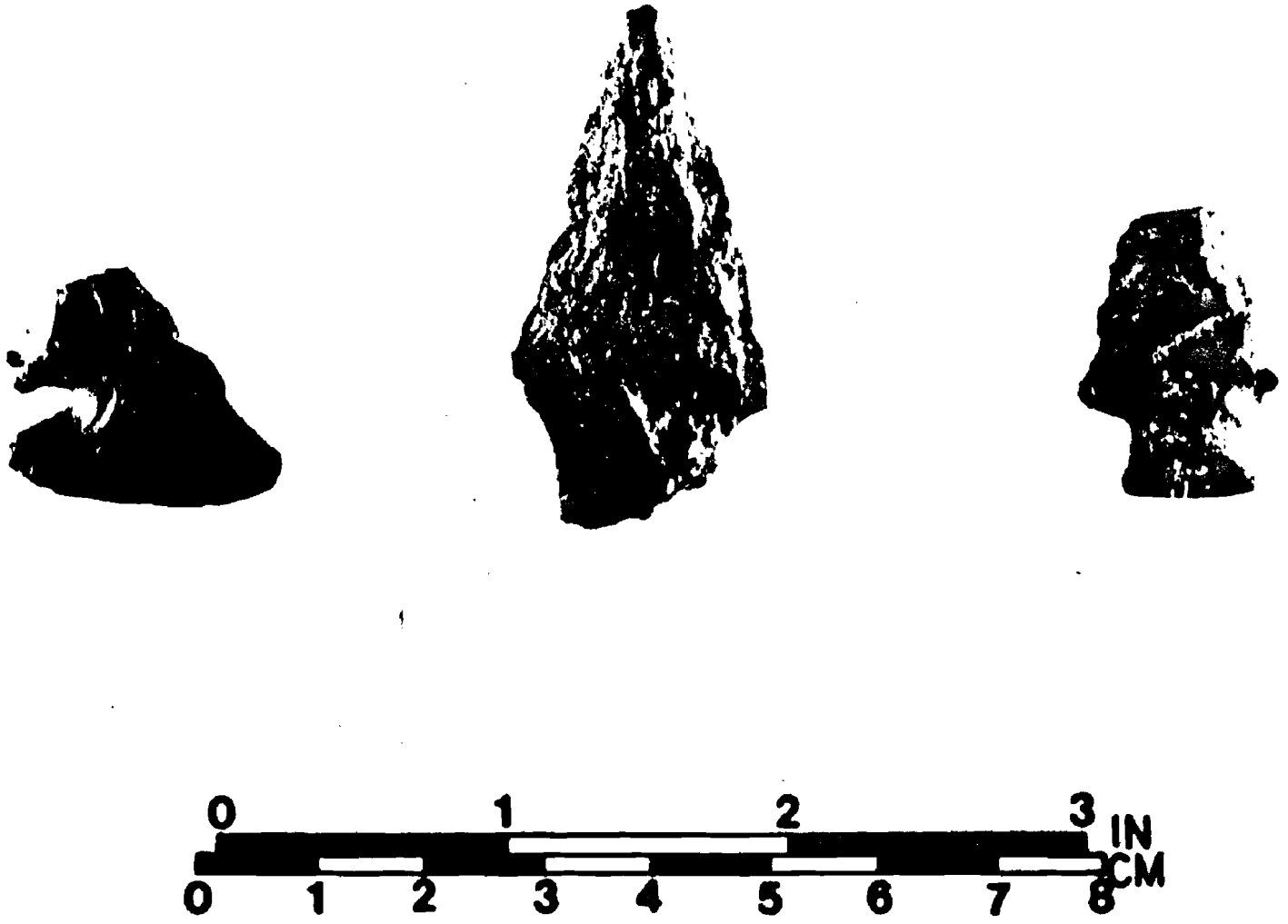
Also notable from this subarea is the Mrs. Albert G. Deneumoustier collection of nearly 600 prehistoric artifacts, all from site 7K-C-344 on her family's farm. Containing representative artifacts from all four periods of Delaware prehistory, this hitherto unknown collection is remarkable in the large number of late Paleo points contained within it, including Dalton, Kirk, and Palmer varieties. This collection will be discussed later in this report (see Appendix III).

Subarea 6-2 Almost all of this subarea is woodlot or was in crops in an advanced state of growth at the time of the survey and no pedestrian reconnaissance could be attempted. However, Fork Branch and several permanent and ephemeral streams course through it and several prominent knolls lie at the confluences, suggesting the possibility of extensive prehistoric occupations.

Subarea 6-3 This subarea encompasses both sides of Fork Branch downstream from Subarea 6-2 and about half of it was obscured by crop growth. However, two farms were walked with positive results. The Edward Evans property on the north side of Fork Branch produced 12 sites, 7K-C-279 through 290, all associated with permanent or ephemeral tributaries and their confluences with Fork Branch. Two of this total produced diagnostic artifacts. Site C-282, located on a sharp point formed by the confluence of an unnamed tributary and a bend in

PLATE 16

Paleo-Indian Points from Sites in the Route 13 South Survey



LEFT TO RIGHT: 7K-C-299, 7K-C-264, 7K-C-80

Fork Branch, produced a Woodland I stemmed point along with other lithic debitage. A large base camp was found on a very sandy rise on the east side of an unnamed tributary, about 300 meters north of its confluence with Fork Branch (site 7K-C-289). The full assemblage consisted of 1 large quartz stemmed biface (116 x 55 x 27 mm), 6 non-diagnostic biface fragments (2 quartz, 2 chert, 1 jasper, 1 argillite), 9 utilized flakes and flake tools, 3 quartz choppers, 1 quartz core, 1 small hammerstone, 1 mortar fragment, 1 highly polished stone (leather working tool?), 22 flakes, and 41 FCR. All of the other sites produced cores, utilized flakes, occasional FCR, and debitage and are most likely procurement sites associated with the large base camp.

The Anna Kucek farm, directly south of Evans' on the south bank of Fork Branch, produced 3 more sites, 7K-C-291, 292, and 293. The first of these, C-291, is a long, narrow scatter stretching along the bank for over 800 meters and which produced Archaic and Woodland I period diagnostic artifacts. A red jasper Neville-like point, 2 quartz square-stemmed points, and a chert contracting stem biface (Plate 1) were found along with numerous other cores, tools, rejected bifaces, a chopper, a hammerstone, 3 abrading stones, flakes, and FCR. At its closest point, C-291 is about 700 meters southeast of 7K-C-289, the base camp across the stream on the Evans farm. Two other sites were found on the Kucek farm: C-292, on the south side of a bay/basin, produced a Poplar Island stemmed point and debitage, and C-293, on the bank of Fork Branch, yielded 1 quartz chopper, 1 quartz utilized flake, 2 hammerstones, 3 flakes, and 10 FCR.

The settlement pattern in this subarea is one of intensive utilization of attractive water settings, including major, minor, and ephemeral tributaries and bay/basins. Large base camps and procurement sites are indicated by the surface scatters found.

Subarea 6-4 This subarea lies south and southwest of Hughes Crossing and is comprised largely of floodplain, woodlot, fields in succession and a few plowed fields. The major watercourses are a segment of Fork Branch and an unnamed tributary to it. All of the ground which could be subjected to pedestrian survey was held by one of three owners: Saxton Lambertson, Wilbur Durham, Jr., and Judge William Bush. Lambertson's holdings within the subarea lie on either side of Kent 156 and 11 sites were found: 7K-C-294 through 298 and 300 through 305 and two of these produced diagnostic artifacts (C-294 and C-305). A jasper stemmed point (Woodland I, Plate 1) and 5 FCR were found on a one meter rise adjacent to an unnamed tributary to Fork Branch (C-294). Site C-305 is a sprawling artifact scatter west of the confluence of Fork Branch and an unnamed tributary and Archaic and Woodland I materials were recovered, including 1 chert bifurcate (Plate 5), 1 jasper teardrop point, 5 stemmed points (2 quartz, 2 chert, 1 argillite), 13 biface fragments in various stages of reduction, 21 utilized flakes (Plate 11), 4 cores, 4 hammerstones, 1 pecked cobble, 1 bevel-edged scraper, 41 flakes, and 43 FCR. Most likely it is a macro-band base camp.

The C-299 site, on the Durham property on the north side of Fork Branch, also appears to be a base camp, and produced one deeply corner notched Late Paleo point (Plate 16), 1 argillite fishtail point (Plate 4), 2 chert teardrop bifaces (Plate 15), 10 non-diagnostic biface fragments, 3 utiliized flakes, 1 core, 3 worked pebble chunks, 59 flakes, and 30 FCR. The site is located on an L-shaped 2.5 meter rise between two small tributaries to Fork Branch.

A notable group of small procurement sites was found due north of the intersection of Kent 100 and 156. These five sites, C-300 through 304, were situated on sandy ridges between a cluster of 4 bay/basin features, which are less common in this part of the coastal plain than in other areas. Unfortunately, no diagnostic artifacts were recovered from these sites. A third cluster of sites was found south of the C-305 site on the south side of a major unnamed tributary to Fork Branch and west of Kent 156. These sites, on Judge William Bush's property, were labeled 7K-C-306 through 311 and produced only non-diagnostic utilized flakes, FCR, and debitage.

The settlement pattern in this vicinity appears to consist of two base camps (C-299 and 305) supported by a number of small procurement sites. The largest site, C-305, occupies the confluence of Fork Branch and a major unnamed tributary, while the smaller sites occupy positions along the lesser tributaries and around the bay/basin features.

Subarea 6-5 Most of this subarea lies west and south of Lower Moore's Corner and consists of much low, wet ground drained by ephemeral and permanent tributaries to Fork and Mudstone Branches. Much of the higher ground is pasture and no-till soybeans and could not be walked. Only 4 sites were recorded for this subarea.

A single quartz corner-notched point was found while investigating a field adjacent to historic structure #706 on the east side of Kent 100 and was designated 7K-C-315. Three small scatters (7K-C-277, 316, and 317) in Leroy Legar's soybean field southwest of Lower Moore's Corner produced only a few flakes and FCR but no diagnostic artifacts. Aubrey Unruh's large cornfield northwest of Lower Moore's Corner and Daniel Mast's clover field on the south side of Kent 100 were also walked but nothing was found.

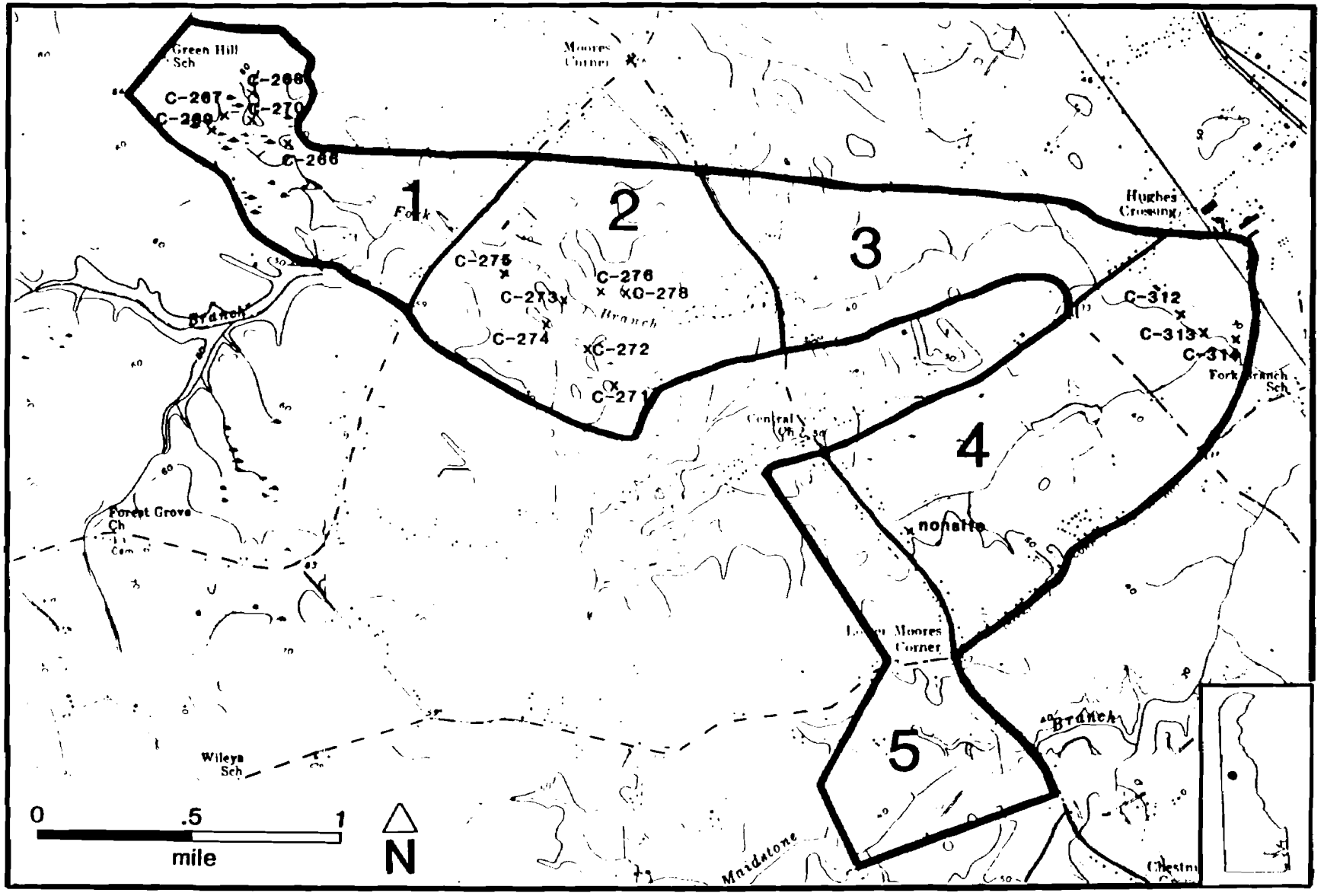
Previously recorded site 7K-C-71, on the south side of Mudstone Branch, is in a fallow field and was not walked. The site's future is in doubt, as single family houses are being constructed in the same field immediately adjacent to the site.

Area 6 - Hughes Crossing Study Area - Subsurface Testing

Figure 29 shows the location of subsurface tests placed in the Hughes Crossing Area and Appendix VII lists the artifacts recovered from the test units. The large woodlot in the center

FIGURE 29

Subsurface Test Locations – Hughes Crossing Study Area 6



of Subarea 6-1 is owned partly by Leroy Yoder and partly by Walter Peretiakos and seven 1 x 1 meter test units were placed in this woodlot. The topography of this woods is interesting in that it forms the headwaters of a minor tributary to Fork Branch and is dissected by several fingers of that stream. These ephemeral streams are separated by low ridges averaging 2 meters high which were composed of well-drained Sassafras sands. The test units were placed at selected locations on these ridges, which historically had never been plowed. Test units 1, 2, 3, 5, and 7 produced prehistoric material in undisturbed contexts and were designated sites C-266 through 270. None produced diagnostic artifacts, but flakes, charcoal, FCR, and an occasional utilized flake were found in all of them and the depths to which artifacts were recovered were 85, 77, 57, 57, and 77 cm below surface, respectively. Thus the deposits are deep as well. See Appendix VI for a soil profile of the test units in site 7K-C-267. Sites C-266 and 270 also produced features of an undetermined type which were quite indistinct and probably date to the early Woodland I Period. This would be consistent with the other materials found in the subarea.

Nine test units were placed in Subarea 6-2 at likely locations on the north and south sides of Fork Branch, with 7 producing prehistoric artifacts (designated sites 7K-C-271 through 276 and 278). However, only one contained diagnostic artifacts: 7K-C-275 on a 3-meter rise at the confluence of Fork Branch and a small unnamed tributary. Thirty-five Minguannan sherds were found just under the humus and flakes and charcoal fragments were found with the sherds and in subsequent lower levels. All of the other units produced flakes, charcoal, and FCR, but no diagnostic artifacts. All of these units were in historically unplowed contexts, which means that not only are the sites undisturbed by the plow, but they have probably suffered minimal erosion as well. Thus, the possibility for finding intact subsurface features is very good.

Four 1 x 1 meter test units were excavated in Subarea 6-4 on high ground in wooded sections. Three were on Reichold Chemical Company property on the northeast side of Fork Branch, south of the C-299 site (7K-C-312, 313, and 314). All three were in a mature woodlot on 2 to 4 meter bluffs which were occasionally cut by ephemeral streams and all produced prehistoric cultural material, including Woodland I points (Poplar Island and Lamoka-like forms) and ceramics (Wolfe Neck, Marcey Creek; Plate 6), Woodland II ceramics (Minguannan, Plate 6), utilized flakes, FCR, charred nut hulls, and wood charcoal. See Appendix VI for a soil profile of the test unit in site 7K-C-314.

The fourth test unit was placed on a low rise on the south side of a tributary to Fork Branch, just east of Kent 104, but produced no cultural material.

Area 8 - Chestnut Grove Study Area - Surface Survey

Figure 30 shows the archaeological sites recorded and the subareas noted in the Chestnut Grove area. Locational attributes of the sites are listed in Table 10 and cultural historical data in Table 11. This study area includes a segment of the Calhoon Branch tributary to the St. Jones River and lies about 5 kilometers west of the center of Dover. The topography is very flat and the land use pattern is a mixture of agricultural fields, poorly-drained woodlots, and dispersed clusters of single family houses. Three previously recorded sites are known from this study area. Sites 7K-C-17 and C-18 lie on the immediate west side of Calhoon Branch, while C-72 lies east of the Branch some distance up a small, unnamed tributary. All three of these sites were partially resurveyed (ground cover restrictions) for this project.

Subarea 8-1 This consisted entirely of no-till cornfield, floodplain, and residential areas and no pedestrian survey could be conducted.

Subarea 8-2 This large subarea was comprised of mostly fallow and no-till fields, residential sections, and the Sharon Hill Memorial Park, and only two small fields could be walked. The first was just north of the Memorial Park on the west side of Calhoon Branch and contained a section of the C-18 site. The survey served to extend the southern limits of the site to the grass line at the southern end of the field. It is unknown if the limits extend any further to the south. Recovered during this survey were: 1 corner-notched chert point (Woodland I, Plate 3), 4 biface rejects and fragments, 6 utilized flakes (Plate 11), 1 core, 6 flakes, and 4 FCR.

The second field lies just north of the C-18 site and was separated from it by a fallow field. Three loci of archaeological activity were identified in this field, the first being an extension of known site C-17 to the south side of Kent 158. However, only 4 flakes and 2 FCR were found. Two other small artifact scatters were found to the south along the banks of Calhoon Branch but produced only utilized flakes, FCR, and debitage. These were designated sites C-319 and C-320.

Subarea 8-3 Five sites, including the previously recorded C-72, were identified in this subarea, which includes the southeast side of Calhoon Branch, north of Delaware 8 to Kent 158. Site C-322, located well back from the stream, produced only a single jasper triangle (Plate 14, Woodland I), probably lost during hunting activities, while site C-323, in a similar location, produced only a jasper corner-notched point (Plate 1 ,Woodland I) and is probably a similar hunting loss. Sites C-321 and C-324, located closer to the stream edges, yielded only small amounts of non-diagnostic biface fragments and debitage. The C-72 site limits were significantly reduced to include only a strip of ground close to the unnamed tributary on which it lies, in the northeastern section of the original site limits. Found during

FIGURE 30

Sites and Subareas – Chestnut Grove Study Area 8

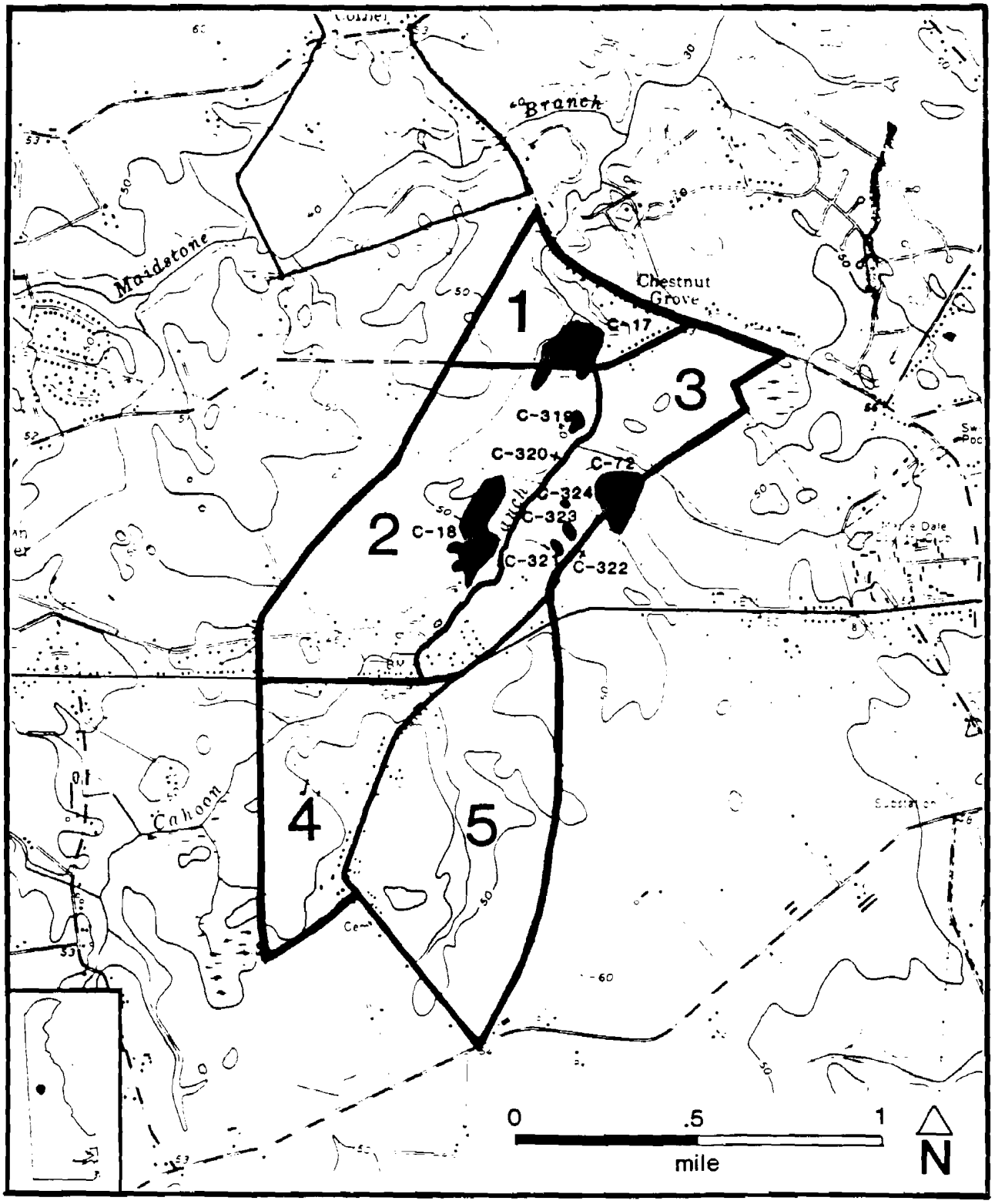


TABLE 10

LOCATIONAL DATA - PREHISTORIC RESOURCES - CHESTNUT GROVE STUDY AREA

SITE NUMBER	FAS NUMBER	USGS QUAD	UTM NORTH	UTM EAST	GEOMORPHOLOGIC SETTING	PRIMARY SOIL SERIES	SECONDARY SOIL SERIES	DRAINAGE	SURFACE WATER SETTING	CONF.	WATER DISTANCE (METERS)	SLOPE	ASPECT	ELEVATION
7K [illegible] -18	K-464	DOVER	165	153	TERRACE	SaB		ST. JOHNS	MAJOR TRIBUTARY	N	1	2	E	10
7K [illegible] 17	K-455	DOVER	197	167	RISE	SaB		ST. JOHNS	STREAM	Y	1	2	N	10
7K [illegible] -319	K-[illegible]49	DOVER	184	171	RISE	SaB		ST. JOHNS	STREAM	Y	1	2	E	10
7K [illegible] -5[illegible]0	K-[illegible]200	DOVER	183	166	RISE	SaB		ST. JOHNS	STREAM	Y	1	2	E	10
7K [illegible] 5[illegible]1	K-[illegible]203	DOVER	165	168	TERRACE	SaB	[illegible]	ST. JOHNS	STREAM	Y	0	3	W	15
7K [illegible] -5[illegible]2	K-[illegible]202	DOVER	162	173	TERRACE	SaB		ST. JOHNS	STREAM	N	3	2	W	15
7K [illegible] 5[illegible]3	K-[illegible]213	DOVER	163	170	TERRACE	SaB	[illegible]0	ST. JOHNS	STREAM	N	4	2	W	15
7K [illegible] 5[illegible]4	K-[illegible]214	DOVER	172	168	TERRACE	SaB		ST. JOHNS	STREAM	N	6	2	W	15
7K [illegible] 21	K-[illegible]4	DOVER	179	178	TERRACE	SaB	[illegible]	ST. JOHNS	STREAM	Y	2	1	N	15
7K [illegible] -[illegible]4	K-[illegible]20[illegible]	DOVER	99	142	RISE	[illegible]		ST. JOHNS	STREAM	N	1	0	N	10

TABLE II

CULTURAL - HISTORICAL DATA - CHESTNUT GROVE STUDY AREA

SITE NUMBER	PALEO	ARCHAIC	WOODLAND I	WOODLAND II	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	HISTORIC	BIFACE	SCRAPER	FLAKE TOOL	CORE	FLAKES	GROUND STONE TOOL	FOR CERAMICS
[illegible]																	Y	Y		Y		Y		Y
[illegible]			Y																			Y		Y
[illegible]																	Y	Y		Y		Y		Y
[illegible]																				Y				
[illegible]																	Y	Y		Y		Y		Y
[illegible]																		Y						
[illegible]			Y	Y														Y				Y		
[illegible]			Y															Y						
[illegible]																		Y						
[illegible]																		Y		Y		Y	Y	
[illegible]			Y																			Y		
[illegible]																								

the 1985 survey were 1 chert Lehigh/Koens-Crispin broadspear (Plate 4) (minority material type, most are of argillite), 1 jasper Bare Island-like biface (Plate 2), 3 utilized flakes, and 1 abraded stone, purpose unknown.

Subarea 8-4 Comprised entirely of poorly-drained woodlot, residential areas, and fallow fields, this subarea offered no visible ground surface.

Subarea 8-5 This subarea was composed entirely of woodlot, no-till cornfields and residential areas and offered no visible ground surface.

Area 8 - Chestnut Grove Study Area - Subsurface Testing

Figure 31 shows the location of the subsurface test unit placed in Area 8 and Appendix VII lists the artifacts recovered from the subsurface tests. One test unit was placed in Subarea 8-5 in an historically unplowed woodlot east of Kent 197, on a 60 cm rise on the south side of a bay/basin feature. Only one quartz flake and 4 charcoal fragments were found, but all were in an undisturbed context, so the location was given the designation 7K-C-325.

Area 5 - Little River/Pipe Elm Branch Study Area- Surface Survey

Figure 32 shows the archaeological sites recorded and subareas noted in the Little River/Pipe Elm Branch area. Locational attributes of the sites are listed in Table 12 and cultural historical data in Table 13. Located on the east side of the Rt. 13 Corridor in the vicinity of Little Creek, Delaware, this study area was one of the most archaeologically productive in the survey, considering its small size Thirty-seven new sites were recorded with the Bureau of Archaeology and Historic Preservation and 8 previously recorded sites were also resurveyed for this project, with additional artifacts being recovered from those. Almost all of it is utilized for agricultural purposes and at the time of the survey, most of the crops, primarily potatoes, were in a too advanced state of growth to allow for pedestrian survey. The Pipe Elm Branch vicinity offered better visibility than Little River, however. Relief, as well as sheet erosion, is minimal throughout this area, and most of the soils are well-drained loams and sandy loams.

Subarea 5-1 This entire subarea is located on Philip Cartanza's Cherbourg Farm, also known locally as "Round Barn Farm" after a circular, multi-story, poured concrete barn located on the property. It is situated on the west side of Pipe Elm Branch between Kent 67 (South Little Creek Rd.) and an unnamed tributary flowing eastward from the north end of the Dover Air Force Base runway. Eight new sites were recorded and one previously known site was resurveyed, with diagnostic artifacts being recovered from 3 sites. Site 7K-D-73 is located along the west bank of Pipe Elm Branch and measures approximately 650 x 250

FIGURE 31

Subsurface Test Locations – Chestnut Grove Study Area 8

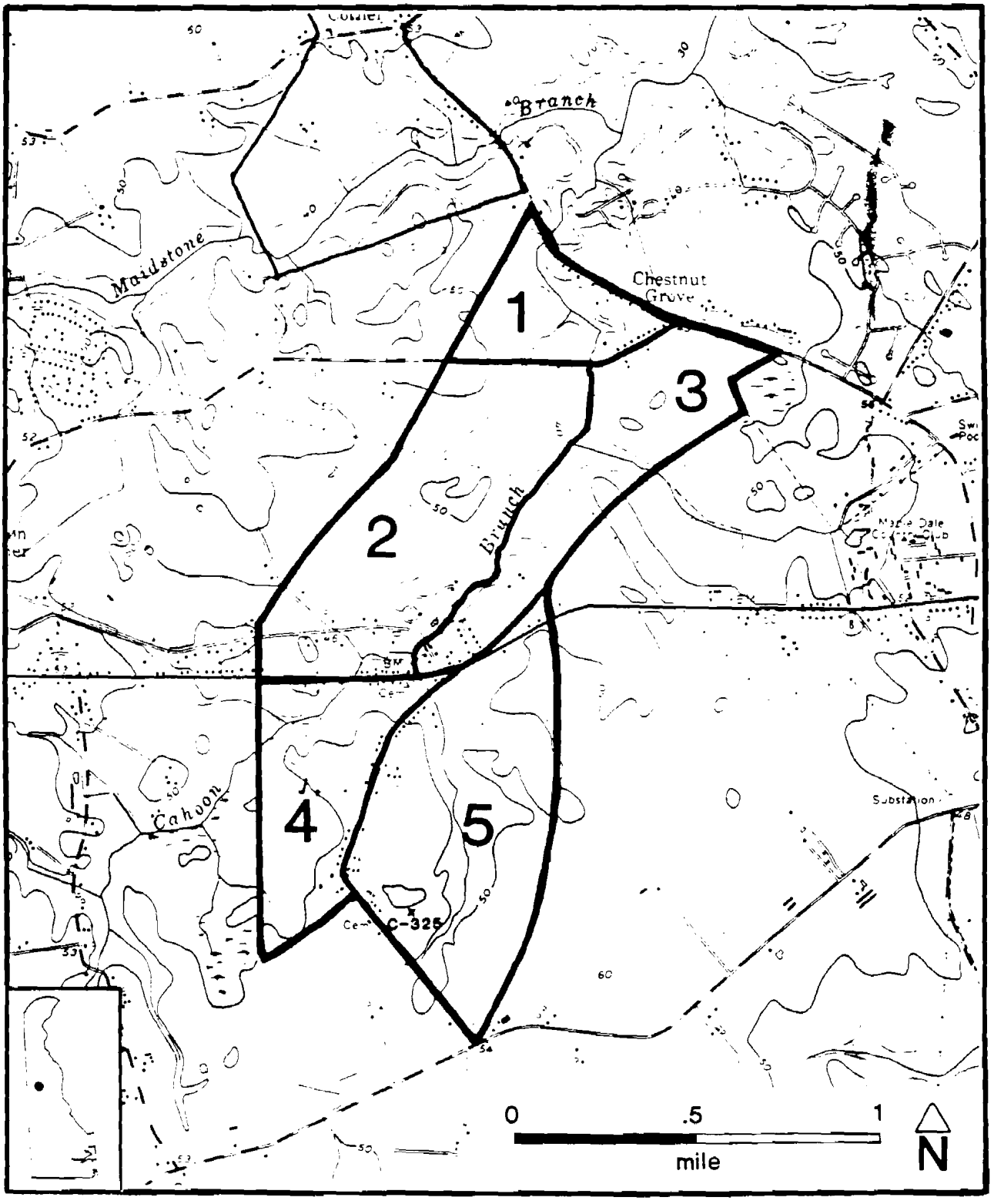


FIGURE 32

Sites and Subareas –
Little River/Pipe Elm Branch Study Area 5

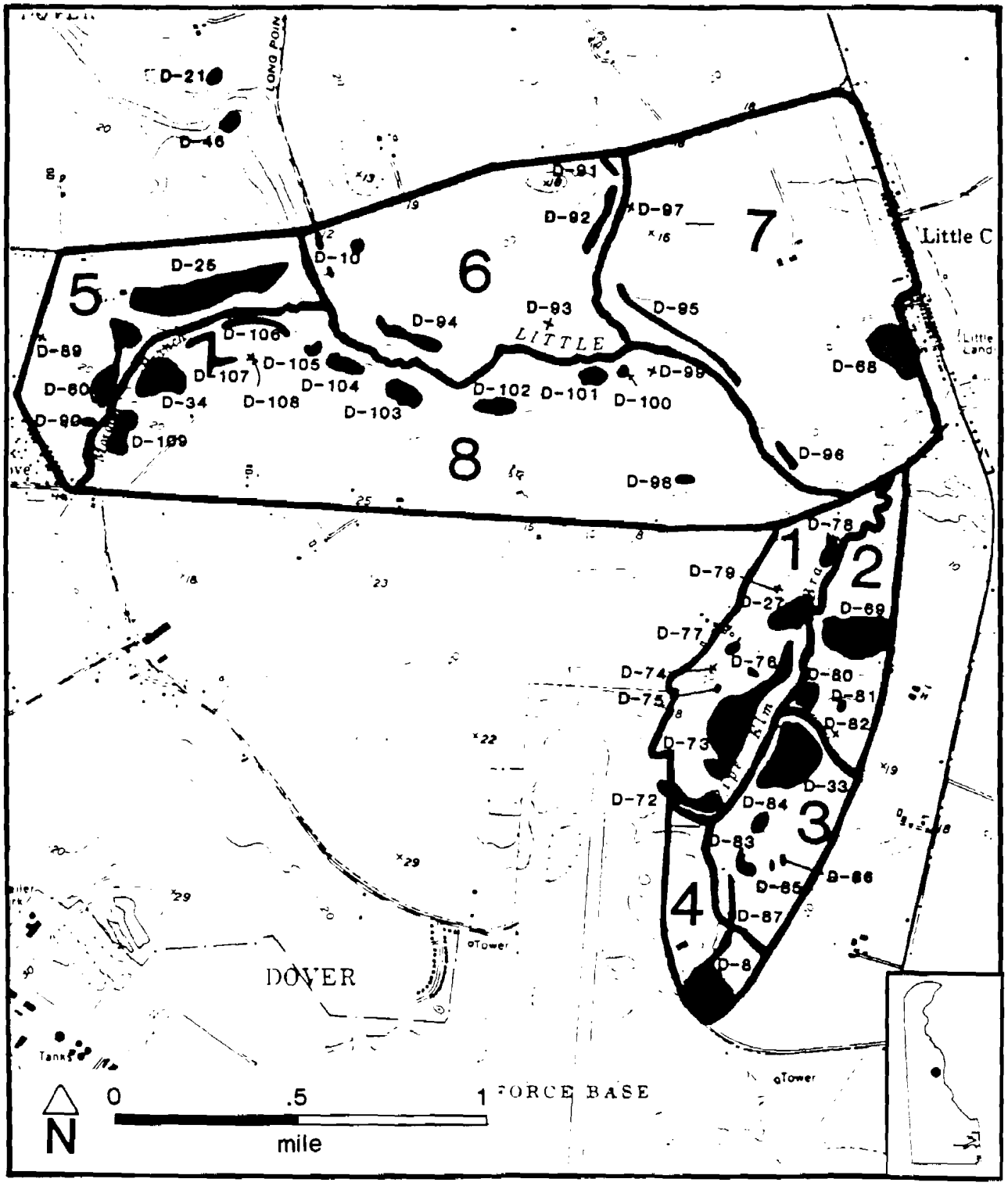


TABLE 12

LOCATIONAL DATA PREHISTORIC RESOURCES LITTLE RIVER/PIPE ELM BRANCH STUDY AREA

SITE NUMBER	CRS NUMBER	USGS QUAD	UTM NORTH	UTM EAST	GEOMORPHOLOGICAL SETTING	PRIMARY SOIL SERIES	SECONDARY SOIL SERIES	DRAINAGE	SURFACE WATER SETTING	CONF.	WATER DISTANCE (METERS)	SLOPE	ASPECT	ELEVATION
3R D-22	K-6099	LITTLE CREEK	90	151	TERRACE	M-B		LITTLE RIVER	STREAM	Y	2	2	SE	10
3R D 23	K-6100	LITTLE CREEK	102	161	TERRACE	M-B		LITTLE RIVER	STREAM	Y	2	2	SE	10
3R D 24	K-6101	LITTLE CREEK	113	153	TERRACE	M-B		LITTLE RIVER	STREAM	N	13	2	SE	22
3R D 25	K-6102	LITTLE CREEK	110	155	TERRACE	M-B		LITTLE RIVER	STREAM	N	15	2	N	22
3R D 26	K-6103	LITTLE CREEK	112	159	LOW TERRACE	M-B		LITTLE RIVER	STREAM	N	3	2	S	15
3R D 27	K-6104	LITTLE CREEK	116	157	TERRACE	M-B		LITTLE RIVER	STREAM	N	3	2	E	15
3R D 27	K-6095	LITTLE CREEK	121	168	TERRACE	M-B		LITTLE RIVER	STREAM	N	3	2	E	5
3R D 28	K-6105	LITTLE CREEK	133	173	TERRACE	M-B		LITTLE RIVER	STREAM	N	1	2	E	5
3R D 29	K-6106	LITTLE CREEK	127	165	LOW TERRACE	M-B		LITTLE RIVER	STREAM	N	1	2	S	12
3R D 30	K-6107	LITTLE CREEK	105	172	LOW TERRACE	M-	M-B	LITTLE RIVER	STREAM	Y	1	0	W	5
3R D 31	K-6108	LITTLE CREEK	106	177	LOW TERRACE	M-B		LITTLE RIVER	STREAM	Y	2	0	N	12
3R D 32	K-6109	LITTLE CREEK	99	174	LOW TERRACE	M-B		LITTLE RIVER	STREAM	N	2	2	SW	12
3R D 33	K-6097	LITTLE CREEK	94	166	LOW TERRACE	M-B		LITTLE RIVER	STREAM	Y	1	2	W	[illegible]
3R D 83	K-6110	LITTLE CREEK	77	160	LOW TERRACE	MI	M-	LITTLE RIVER	STREAM	Y	3	0	W	10
3R D 83	K-6111	LITTLE CREEK	85	163	TERRACE	M-B		LITTLE RIVER	STREAM	Y	6	0	SW	10
3R D 86	K-6112	LITTLE CREEK	79	164	RISE	M-B		LITTLE RIVER	STREAM	N	3	2	S	15
3R D 86	K-6113	LITTLE CREEK	77	166	RISE	M-B		LITTLE RIVER	STREAM	N	^ 5	2	S	15
3R D 87	K-6114	LITTLE CREEK	71	152	LOW TERRACE	S-B		LITTLE RIVER	STREAM	Y	2	2	W	5
3R D 8	K-6005	LITTLE CREEK	56	151	LOW TERRACE	M-B		LITTLE RIVER	STREAM	Y	2	2	W	15
3R D 25	K-489	LITTLE CREEK	178	55	TERRACE	S-B	M-C	LITTLE RIVER	STREAM	Y	1	2	S	15
3R D 88	K-6165	LITTLE CREEK	170	48	RISE	M-B	M-B	LITTLE RIVER	STREAM	Y	1	0	E	15
3R D 89	K-6116	LITTLE CREEK	171	32	RISE	[illegible]		LITTLE RIVER	NONE	N	20	5	UN	25
3R D 90	K-6117	LITTLE CREEK	156	41	LOW TERRACE	M-	M-B	LITTLE RIVER	STREAM	Y	2	0	E	10
3R D 91	K-6118	LITTLE CREEK	204	134	RISE	M-B		LITTLE RIVER	STREAM	N	1	2	E	12
3R D 92	K-6119	LITTLE CREEK	195	135	RISE	M-B	M-B	LITTLE RIVER	MNR TRIB	N	1	0	E	12
3R D 93	K-6120	LITTLE CREEK	175	125	LOW TERRACE	M-B		LITTLE RIVER	MNR TRIB	Y	4	2	S	12
3R D 94	K-6121	LITTLE CREEK	170	101	LOW TERRACE	M-B	M-B	LITTLE RIVER	STREAM	N	2	0	S	5
3R D 10	K-490	LITTLE CREEK	182	86	KNOLL	M-B	M-B	LITTLE RIVER	STREAM	Y	1	2	W	10
3R D 95	K-6122	LITTLE CREEK	125	145	TERRACE	M-B	M-B	LITTLE RIVER	STREAM	Y	1	0	SW	5
3R D 96	K-6123	LITTLE CREEK	149	162	LOW TERRACE	M-B		LITTLE RIVER	STREAM	Y	1	0	S	5
3R D 97	K-6124	LITTLE CREEK	194	158	LOW TERRACE	M-B		LITTLE RIVER	STREAM	N	1	2	W	10
3R D 98	K-6125	LITTLE CREEK	147	142	KNOLL	S-B		LITTLE RIVER	STREAM	N	1	2	S	10
3R D 99	K-6126	LITTLE CREEK	167	141	TERRACE	S-B		LITTLE RIVER	STREAM	N	1	2	N	10
3R D 100	K-6127	LITTLE CREEK	167	137	LOW TERRACE	S-B		LITTLE RIVER	STREAM	Y	2	2	N	10
3R D 101	K-6128	LITTLE CREEK	165	132	LOW TERRACE	S-B		LITTLE RIVER	STREAM	Y	1	2	N	10
3R D 102	K-6129	LITTLE CREEK	165	115	TERRACE	S-B		LITTLE RIVER	STREAM	Y	1	2	N	10
3R D 103	K-6130	LITTLE CREEK	163	90	KNOLL	S-B		LITTLE RIVER	STREAM	N	1	2	N	10
3R D 104	K-6131	LITTLE CREEK	168	88	LOW TERRACE	S-B		LITTLE RIVER	STREAM	Y	1	2	N	15
3R D 105	K-6132	LITTLE CREEK	171	82	LOW TERRACE	S-B		LITTLE RIVER	STREAM	Y	1	2	N	15
3R D 106	K-6133	LITTLE CREEK	174	76	TERRACE	S-B		LITTLE RIVER	STREAM	Y	1	2	N	15
3R D 107	K-6134	LITTLE CREEK	167	62	TERRACE	S-B		LITTLE RIVER	STREAM	Y	1	0	N	20
3R D 108	K-6135	LITTLE CREEK	168	71	RISE	S-B		LITTLE RIVER	STREAM	N	7	2	N	25
3R D 11	K-488	LITTLE CREEK	166	55	LOW TERRACE	S-B		LITTLE RIVER	STREAM	Y	1	2	W	25
3R D 109	K-6136	LITTLE CREEK	155	46	KNOLL	S-B		LITTLE RIVER	STREAM	Y	1	2	W	20

TABLE 13

CULTURAL - HISTORICAL DATA - LITTLE RIVER/PINE FLAT BRANCH STUDY AREA

SITE NUMBER	PALEO	ARCHAIC	WOODLAND I	WOODLAND II	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	HISTORIC	DEFACE	SCRAPER	FLAKE TOOL	CORE	FLAKES	GROUND STONE TOOL	POT	CERAMICS
2K D 22															Y	Y	Y		Y	
2K D 23			Y					Y				Y	Y		Y		Y	Y	Y	
2K D 24															Y					
2K D 25			Y										Y				Y		Y	
2K D 26																	Y		Y	
2K D 27																	Y		Y	
2K D 28													Y		Y		Y		Y	
2K D 29			Y										Y		Y		Y		Y	
2K D 30	Y												Y				Y		Y	
2K D 31															Y			Y		
2K D 32			Y										Y							
2K D 33			Y			Y	Y		Y				Y			Y	Y	Y	Y	
2K D 34			Y										Y		Y	Y	Y		Y	
2K D 35			Y										Y							
2K D 36			Y					Y					Y		Y	Y	Y			
2K D 37															Y	Y			Y	
2K D 38			Y	Y				Y				Y	Y		Y		Y	Y	Y	Y
2K D 39			Y	Y									Y		Y		Y		Y	
2K D 40			Y	Y						Y			Y		Y	Y	Y		Y	Y
2K D 89															Y				Y	
2K D 90																	Y		Y	
2K D 91													Y		Y		Y		Y	
2K D 92				Y						Y			Y		Y		Y		Y	Y
2K D 93															Y					
2K D 94			Y										Y				Y		Y	
2K D 10				Y						Y			Y		Y	Y	Y	Y	Y	Y
2K D 95			Y	Y									Y		Y	Y	Y		Y	
2K D 96			Y										Y		Y				Y	
2K D 96			Y										Y		Y	Y	Y		Y	
2K D 97															Y					
2K D 98																	Y		Y	
2K D 99			Y										Y							
2K D 100															Y				Y	
2K D 101																	Y		Y	
2K D 102			Y										Y		Y		Y		Y	
2K D 103																			Y	
2K D 104															Y	Y			Y	
2K D 105														Y	Y			Y	Y	
2K D 106															Y		Y		Y	
2K D 107			Y										Y	Y	Y	Y	Y	Y	Y	
2K D 108															Y				Y	
2K D 34			Y	Y									Y		Y	Y	Y		Y	
2K D 109													Y		Y		Y		Y	

meters. Dissected by 5 ephemeral streams, it yielded 1 jasper Lehigh Koens/Crispin broadpoint (Plate 4), 1 quartz square-stem point base, 1 jasper Jack's Reef point (all Woodland I), 1 quartz late stage biface reject, 3 flake tools (2 jasper, 1 chert), 17 utilized flakes (7 chert, 6 quartz, 3 jasper, 1 quartzite), 1 large quartzite chopper,1 anvilstone/muller (Plate 12), 1 bi-pitted hammer, 24 flakes, and 74 FCR. It probably functioned as a macro-band base camp, although ceramics are lacking. Site 7K-D-75 produced 1 jasper fishtail point (Woodland I), 1 quartzite point distal fragment, 1 flake, and 3 FCR, while 7K-D-78 produced 1 quartzite corner-notched point (Woodland I), 1 jasper utilized flake, 1 unutilized flake, and 10 FCR. The latter site was located on the bank of Pipe Elm Branch, while the former was found some distance up an ephemeral tributary to the same stream. The other 6 sites from this subarea, 7K-D-72, 74, 76, 77, 79, and previously recorded D-27, produced utilized and unutilized flakes, cores, FCR, and 2 biface rejects (D-27) along the lengths and at the heads of ephemeral streams leading to Pipe Elm Branch.

Subarea 5-2 This is located on the east bank of Pipe Elm Branch directly opposite Subarea 5-1. Most of it was in crops at the time of the survey, including known site 7K-D-69, and could not be walked. The only visible ground was on the Fred Stites farm at the south end of the subarea and this was walked with 3 new sites being recorded. Site 7K-D-80 lies on a 1 meter rise on the east bank of Pipe Elm Branch at its confluence with two unnamed tributaries and produced a corner-notched chert point with a heavily ground base which resembled a Kirk point (Plate 16), 1 chert early stage biface reject, 3 utilized flakes (2 chert, 1 rhyolite), 6 unutilized flakes, and 6 FCR. The Kirk point dates to the late Paleo-Indian Period of about 7500 B.C. Up one of the unnamed tributaries from D-80, on a 2 meter rise, lies the D-81 site, which yielded just three artifacts: 1 hammerstone, 1 utilized quartz flake, and 1 unutilized rhyolite flake. However, these artifacts were found in a remarkably tight cluster measuring only 1 x 1.5 meters and probably represent a single episode butchering site. The final site is D-82, also situated along one of the unnamed tributaries mentioned in connection with the D-80 site, and it produced just one artifact - a chert fishtail or reworked broadpoint of the early Woodland I Period.

The D-69 site is also located on the Stites Farm, and although it was inaccessible at the time of the survey due to crop growth, Fred Stites' collection from the site was examined by the UDCAR survey crew. It contains about 50 bifaces and several ground stone tools but no ceramics, probably due to collector bias. Recorded from the collection were 4 argillite Poplar Island points, 1 triangle, 1 fishtail, 1 Lehigh/Koens-Crispin broadpoint, 1 whole celt, 2 celt fragments, 1 pestle fragment, 3 hammerstone fragments, 1 ground diorite stone resembling an anthropomorphic form, the mouthpiece fragment of a ground stone platform pipe, 1 tabular dense ground stone fragment with 3 drill holes, 2 mortars, several utilized flakes, and 1 calcined bone fragment. Several other bifaces were noted, most

of which were Woodland I stemmed and notched varieties. Lithic materials included quartz, quartzite, chert, jasper, Flint Ridge (Ohio) chalcedony, porphyritic rhyolite, and purple argillite.

Subarea 5-3 This subarea is also situated on the east side of Pipe Elm Branch on the farms of Fred Stites and Richard Bergold. Again, relief is slight and the majority of the land surface is cultivated. The bank of Pipe Elm Branch in this subarea is covered with an historically unplowed woodlot, which likely obscures other sites. Two previously recorded sites were resurveyed (7K-D-8 and D-33) and 5 new sites (7K-D-83 through 87) were recorded with the BAHP. Site D-33 is located due south of D-80 at the confluence of Pipe Elm Branch and an unnamed tributary. A substantial Woodland I assemblage was gathered from the site, including 1 ironstone Poplar Island point, 1 Bare Island/Lackawaxen point, 1 Rossville point, 12 utilized flakes (6 quartz, 1 quartzite, 3 chert, 2 jasper), 2 large argillite flakes, 2 quartz cores, 1 full grooved-ax (Plate 8), 1 celt bit fragment, 1 pitted stone, numerous flakes and FCR, 1 Coulbourn sherd (Plate 6), 1 Wolfe Neck sherd (Plate 6), and 2 Mockley sherds (Plate 6). The site is large, measuring about 300x400 meters, and probably is a macro-band base camp. About 250 meters south of this lies the D-83 site, which produced another Woodland I component. This site, located at the confluence of Pipe Elm Branch and an ephemeral stream, yielded a chert Bare Island point, 1 small chert broadspear, 1 quartz utilized flake, 1 quartz core, 3 flakes, and 11 FCR and could be a micro-band base camp. Another site of this type, D-84, was found between these two at another ephemeral stream and produced 1 corner-notched jasper point (Plate 3) and a utilized jasper flake. Sites D-85 and D-86 were located on rises on the north side of the ephemeral stream mentioned in connection with D-83 and also produced diagnostic artifacts. One chert Bare Island point, 1 Wolfe Neck sherd (Plate 6), 1 rhyolite flake, and 2 FCR were recoverd from D-85, while D-86 produced 1 quartz core, 3 chert flakes (2 utilized), and a 53 x 54 mm medial section of an Adena biface made of Flint Ridge, Ohio, chalcedony. This last-named artifact is one of the most significant found on the survey, as it serves to further support the Ohio connection with the Woodland I cultures of Kent County, Delaware, and has important implications for trade and exchange in the Middle Atlantic at that time (cf. Custer 1984: passim; Thomas 1970:56-87, 1977; Ritchie and Dragoo 1959; Wise 1974; Ford 1976). Another small site was located south of D-83, across the ephemeral stream and yielded a jasper core, 2 utilized flakes, and several FCR (7K-D-87).

The D-8 site on the Richard Bergold farm was resurveyed and the owner's collection from the site was also examined. The UDCAR pedestrian survey found 1 jasper triangle, 2 utilized flakes, 1 chert core, 1 pestle fragment, 3 bi-pitted stones, 2 hammerstones, and 1 bi-pitted stone/hammerstone. The owner's collection included 3 triangles, 1 side-notched Adena biface, 1 lobate-stemmed Adena biface, 1 lanceolate point, 2 corner notched bifaces, 2 contracting stem bifaces, 1 Perkiomen broadpoint, 2 Fox Creek stemmed points (1 argillite 64 x 28 x 8 mm, 1 aphanitic

rhyolite 46 x 28 x 7 mm), 2 other non-diagnostic bifaces, 1 prehistoric pipestem fragment, two 3/4-grooved axes, 1 full-grooved ax, 1 granite celt, 1 pestle, 1 abrading stone, 1 pitted stone, 2 heavy hammerstones, and 2 large mortars with use wear on both faces. The total assemblage suggests a macro-band base camp of both the Woodland I and II Periods. Note once again the presence of Adena points in this drainage.

Subarea 5-4 This subarea is composed entirely of fallow fields, small woodlots, and commercial yards and offered no visible ground.

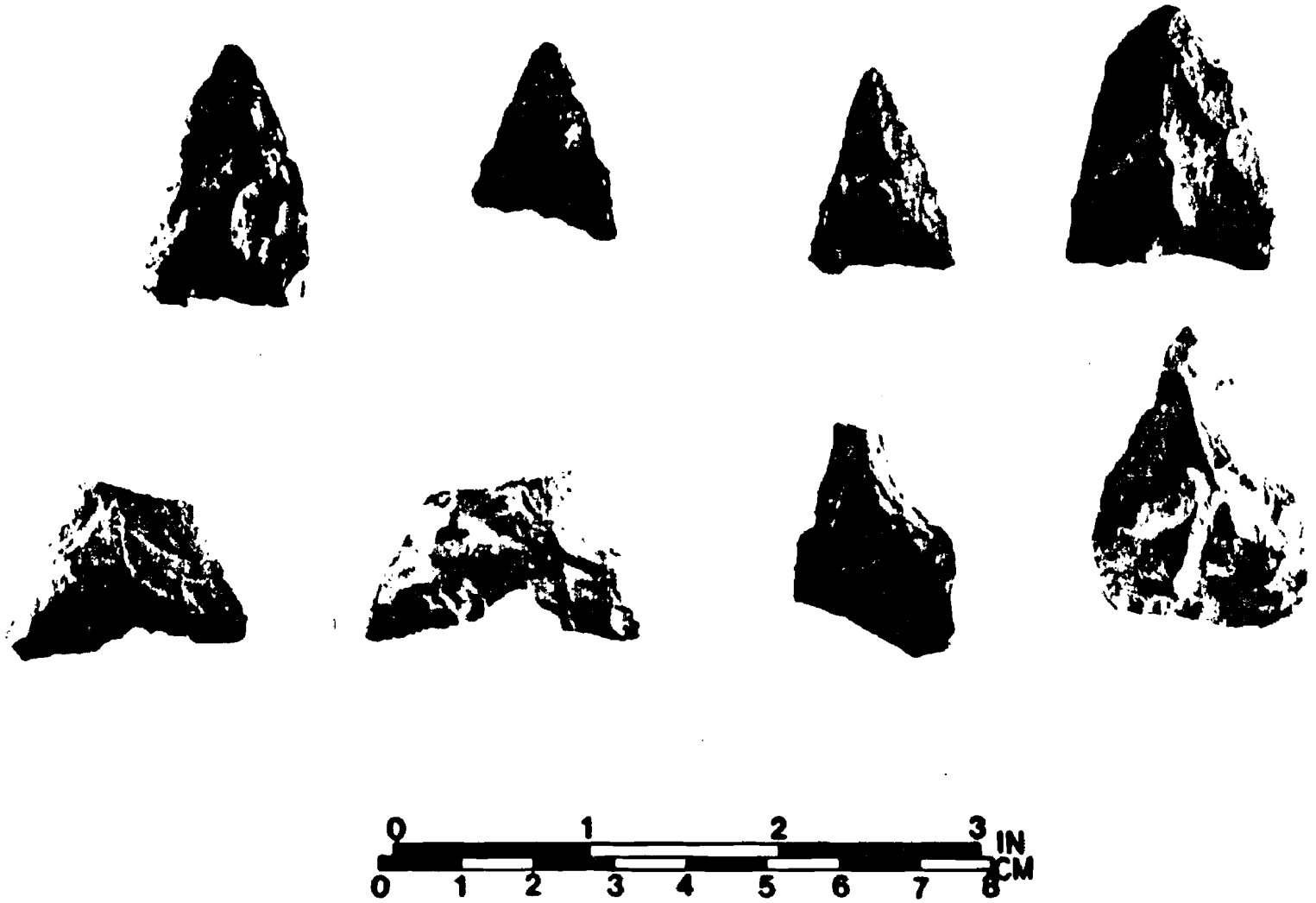
Subarea 5-5 Lying between Kent 344 (Fox Lane) and Morgan Branch, this subarea is situated entirely on lands owned by Stanley J. Rolle, Sr. and is characterized by moderate relief, including several 3-meter high knolls along the Branch itself. Two previously recorded sites, 7K-D-25 and D-60, were resurveyed and 2 new sites, 7K-D-89 and 90, were recorded with the BAHP. The D-25 site limits were greatly expanded by this year's survey and it measures approximately 700x180 meters. The limits now extend from the Rolle Farm barn on the west to the confluence of Morgan Branch and Little River on the east. Although the artifact scatter was thin, several tools, including diagnostic artifacts, were found. Two jasper triangles, 1 non-diagnostic jasper medial/distal biface section, 1 non-diagnostic rhyolite biface, 2 biface reject fragments, 2 flake tools, 6 utilized flakes, and a few flakes and FCR were recovered. Site D-60 lies southwest of D-25 and is also a long artifact scatter on the north side of Morgan Branch. Woodland I and Woodland II materials were found, including 1 argillite broadspear, 1 triangular jasper drill (Plate 17), 3 non-diagnostic bifaces, 7 utilized flakes, 1 jasper core, 2 Townsend cord-marked sherds, 36 flakes, and 35 FCR. Both of these sites are probably base camps.

The D-89 site is curious in that it is located just east of Fox Lane far from any modern or relict water source. Just one utilized quartz flake and 6 FCR were recovered and it probably is the remains of a single overnight campsite. The D-90 site lies south of D-60, just southwest of the confluence of Morgan Branch and an ephemeral tributary, and yielded only 2 flakes and a handful of FCR and, like D-89, is probably a single episode campsite.

Subarea 5-6 The farm comprising this subarea is entirely owned by Philip Cartanza, Shady Brook Farm, Rt. 9, Little Creek, Delaware. At the time of the survey, it was planted with potatoes and the field proper could not be walked. However, the farm lane around the perimeter did offer moderate-to-good visibility and 5 sites were identified. Site 7K-D-92, a lengthy scatter along the west side of an unnamed tributary to Little River, produced 1 jasper triangle (Plate 17), 1 quartz biface reject, 6 utilized flakes, 1 Townsend undecorated sherd, 4 flakes, and several FCR. Site 7K-D-94 is situated along a low terrace on the north bank of Little River and yielded a Woodland I component consisting of 1 argillite teardrop biface (Plate 2),

PLATE 17

Selected Triangle Points from Sites in the Route 13 South Survey



TOP ROW, left to right: 7K-D-25, 7K-D-34, 7K-D-92, 7K-D-95; BOTTOM ROW, left to right: 7K-D-25, 7K-D-34, 7K-D-10, 7K-D-60

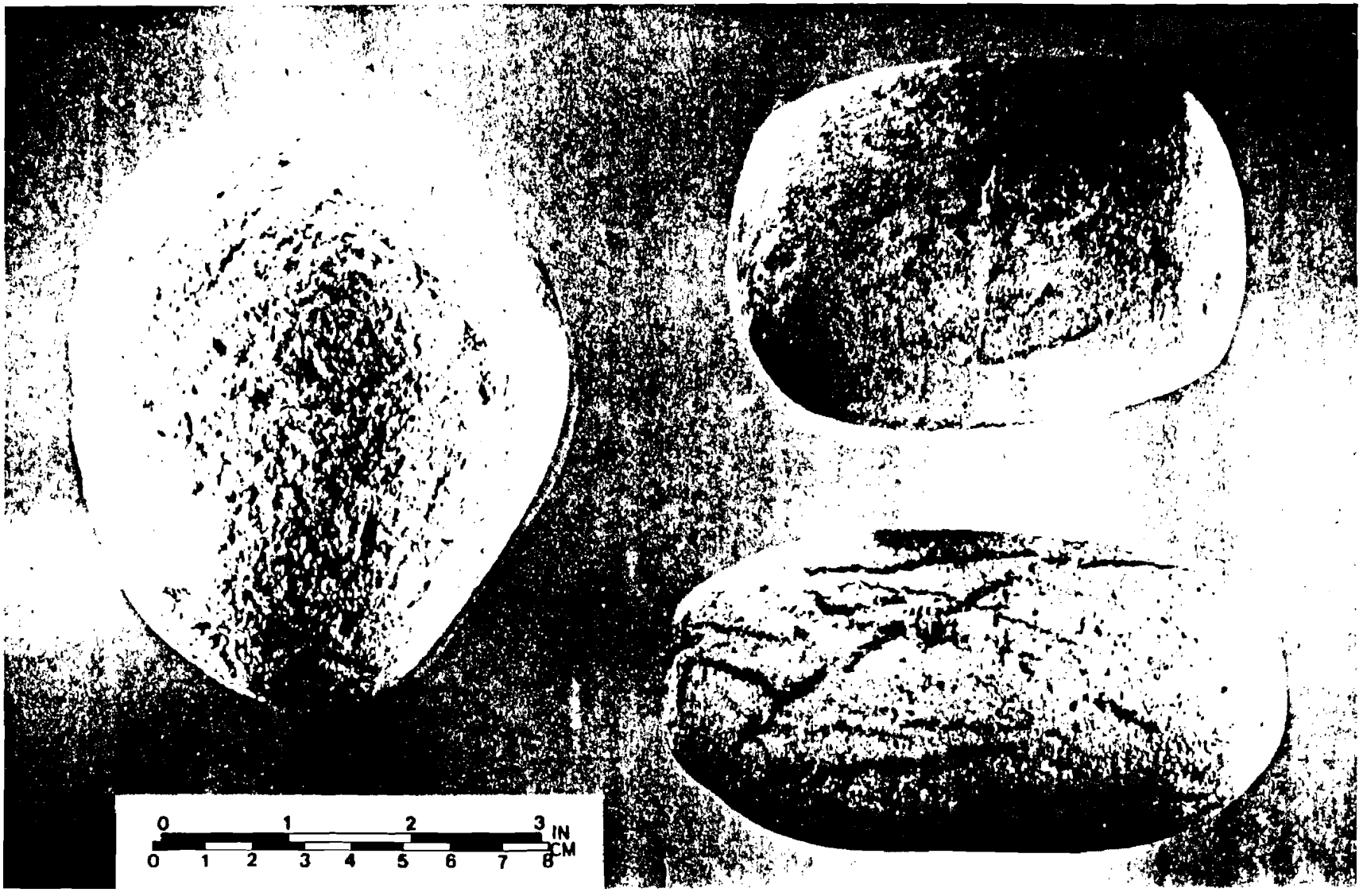
1 non-diagnostic chert biface fragment, 5 flakes, and 12 FCR. Another surface scatter was found along the east side of an unnamed tributary to Little River and is presumed to be an extension of the previously recorded D-10 site. Diagnostic artifacts found here included a triangular drill fragment, a chert triangle point (plate 17) and 1 sherd of Townsend ceramics; other recovered artifacts included utilized flakes, cores, a drill, rejected bifaces (Plate 13), flakes, and FCR. Also found in this subarea were D-91 and D-93, which produced broken bifaces, discarded tools, and FCR in small amounts and are most likely procurement sites related to the nearby larger base camps.

Subarea 5-7 Like Subarea 5-6, this area was also planted in potatoes and offered little visibility at the time of the survey. However, the edge of the field did offer a 3 to 6 meter wide strip which could be walked with positive results. The limits of the D-68 site, located just northwest of the Little Creek town line, were expanded southward as a result of the survey. Found were 2 stemmed points (1 chert, 1 quartz), 3 utilized flakes, and several FCR. Located southwest of the D-68 site, opposite the confluence of Little River and an unnamed tributary, is the D-96 site, which contained a chert Bare Island point, 1 chert core, an argillite flake tool, a muller (Plate 18) and several flakes and FCR. A much larger artifact scatter was found northwest of this site, at the confluence of Little River and an unnamed tributary. It measures about 900 meters in length but averages only 3 meters in width - limits which are most likely artificially set by the potato crop. Tools were plentiful on this site, designated 7K-D-95, and diagnostic artifacts included 1 Lehigh/Koens-Crispin broadpoint, 1 rhyolite Bare Island point, 1 other Woodland I stemmed point, and 1 chert triangle (Plate 17). Several other non-diagnostic bifaces, a dozen utilized flakes and flake tools (Plate 13), cores, unutilized flakes, and FCR were found. The artifacts suggest it is some sort of hunting/processing site, although its size would suggest a base camp. The precaution about the site's true limits has been noted above. Site D-97, located up the unnamed tributary from D-95, produced only 1 chert flake tool.

Subarea 5-8 Survey in this large subarea on the south side of Little River was hampered by considerable advanced crop growth and visibility was quite limited. Nevertheless, 1 previously recorded site (7K-D-34) and 12 new ones (7K-D-98 through 109) were located by pedestrian survey, with diagnostic artifacts being recorded from 4 of the 13 total sites. The eastern half of the subarea is in the Ernest Zimmerman farm and two sites produced diagnostic artifacts. Site D-99 is located directly opposite D-95 on the south bank of Little River and produced 1 quartz Poplar Island point. The D-102 site lies on a spit jutting out into the Little River floodplain and was partially obscured by a barley field. However, another quartz Poplar Island point was found, as well as 5 utilized flakes, and several unutilized flakes and FCR. Four other sites were recorded from the Zimmerman farm (D-98, 100, 101, and 103), all of which were

PLATE 18

Selected Ground Stone Tools from Sites in the Route 13 South Survey



LEFT: muller from 7K-D-96; UPPER RIGHT: hammerstone from 7K-D-105; LOWER RIGHT: anvil/hammerstone from 7K-C-162

located on the terrace on the bank of Little River, and all produced small amounts of non-diagnostic debitage and FCR. Another portion of the Stanley J. Rolle, Sr. farm comprised the western end of this subarea. Two notable sites were recorded from this farm. A Woodland I assemblage of Rossville points (Webb Complex) and Bare Island points (Barker's Landing Complex, Plate 2), as well as numerous other utilized flakes, biface fragments, scrapers, cores, and hammerstones, were found at D-107, while the resurveyed D-34 site yielded a Woodland I side-notched quartz point (Plate 3), a pair of Woodland II triangles (Plate 17), and a total of 24 other non-diagnostic tools of miscellaneous types.

Five other sites (D-104, 105, 106, 108, and 109) were found around the perimeter of the field on the terrace above Morgan Branch or Little River and all produced small quantities of non-diagnostic artifacts.

Area 9 - Wyoming Lake Study Area - Surface Survey

Figure 33 shows the archaeological sites recorded and the subareas noted in the Wyoming Lake area. Locational attributes of the sites are listed in Table 14 and cultural historical data in Table 15. This study area includes a section of Isaac Branch northwest of Wyoming, Delaware. The most prominent landmark is the dammed pond known as Wyoming Lake, situated in the east end of the study area. Surveyed ground included the fields along the banks of the lake and the western tributaries which feed it.

Subareas 9-1 and 9-2 Both of these subareas consisted entirely of asparagus, no-till soybeans, and freshly plowed, unweathered fields and offered no visible ground surface.

Subarea 9-3 Four small surface scatters were found in the southeast corner of the cornfield at the confluence of Isaac Branch and an unnamed tributary. All produced FCR and an occasional flake, but no diagnostic artifacts, and were designated 7K-C-331 through 334.

Subarea 9-4 This subarea, located on the north side of Wyoming Lake, had been plowed, disced and weathered at the time of the survey and offered good visibility. Five sites were recorded, three of which were locations of single diagnostic bifaces. These three, located about 100 meters apart on a terrace 250 meters north of Wyoming Lake, produced a quartzite Bare Island-like stemmed point (C-328), a jasper triangle (C-329) (Plate 14), and a quartz corner-notched point (C-330) (Plate 3). No other artifacts were found with these bifaces and it is presumed that they are projectile points which were lost during hunting activities. Two other sites by the lake edge, C-326 and C-327, produced only non-diagnostic bifaces and debitage.

Subarea 9-5 This was entirely orchards and asparagus fields and offered no visible ground surface.

FIGURE 33

Sites and Subareas – Wyoming Lake Study Area 9

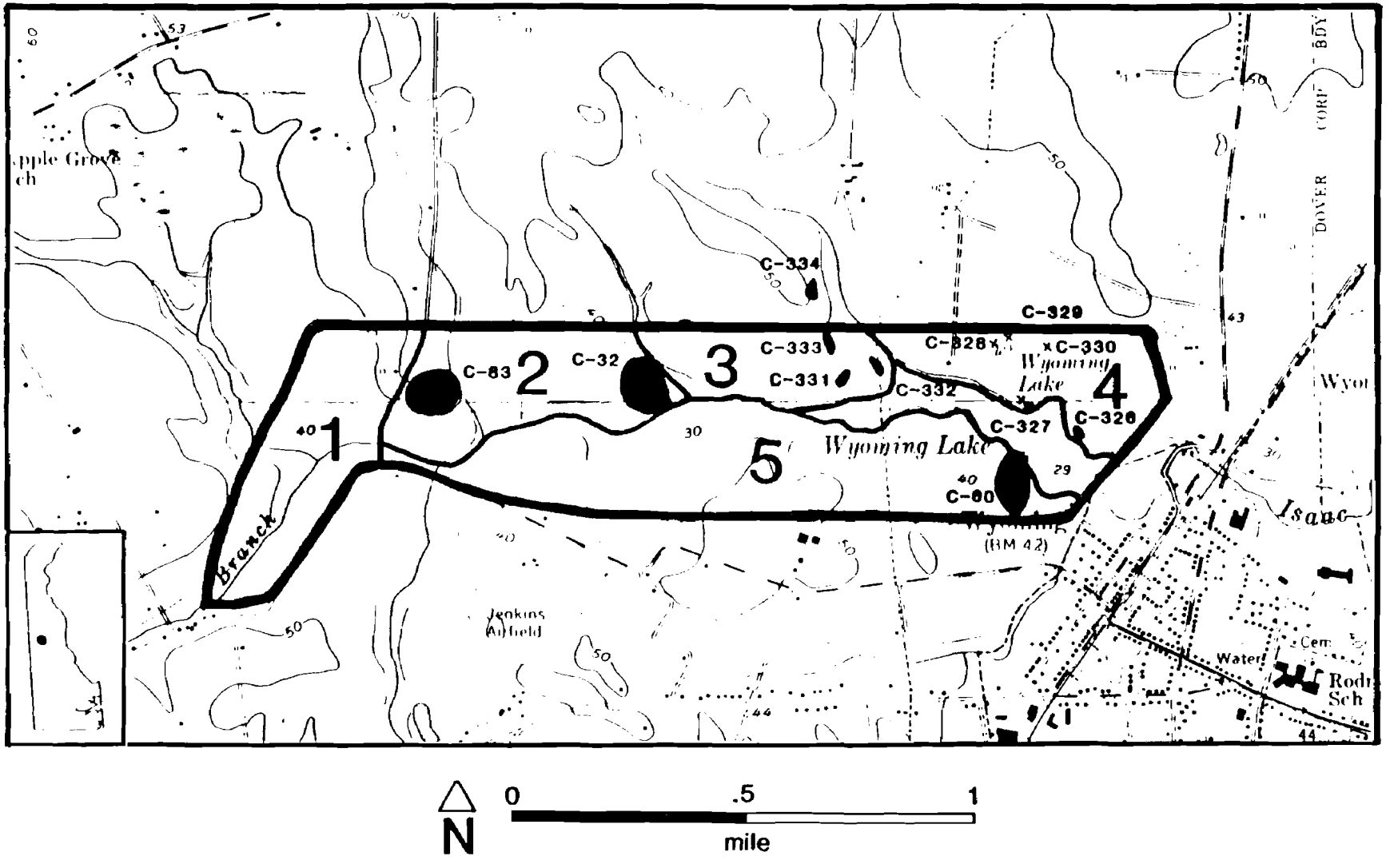


TABLE 17

LOCATIONAL DATA - PREHISTORIC RESOURCES - WYOMING LAKE STUDY AREA

SITE NUMBER	USGS QUAD	UTM NORTH	UTM EAST	GEOMORPHOLOGICAL SETTING	PRIMARY SOIL SERIES	SECONDARY SOIL SERIES	DRAINAGE	SURFACE WATER SETTING	CONF.	WATER DISTANCE (METERS)	SLOPE	ASPECT	ELEVATION
48 [illegible] 551	[illegible] 6211	DOVER	3	196	TERRACE	[illegible]	ST. JONES	STREAM	Y	2	2	S	30
48 [illegible] 552	[illegible] 6212	DOVER	4	203	TERRACE	[illegible]	ST. JONES	STREAM	Y	1	2	SE	30
48 [illegible] 553	[illegible] 6213	DOVER	9	195	TERRACE	[illegible]	ST. JONES	STREAM	N	2	2	E	38
48 [illegible] 554	[illegible] 6215	DOVER	3	183	TERRACE	[illegible]	ST. JONES	STREAM	N	1	0	S	40
48 [illegible] 526	[illegible] 6205	DOVER	574	232	RISE	[illegible]	ST. JONES	STREAM	N	4	2	S	30
48 [illegible] 527	[illegible] 6207	DOVER	1	222	RISE	[illegible]	ST. JONES	STREAM	N	3	2	S	30
48 [illegible] 528	[illegible] 6208	DOVER	10	220	RISE	[illegible]	ST. JONES	STREAM	N	1	2	W	45
48 [illegible] 529	[illegible] 6209	DOVER	11	222	RISE	[illegible]	ST. JONES	STREAM	N	2	2	W	45
48 [illegible] 530	[illegible] 6210	DOVER	9	227	RISE	[illegible]	ST. JONES	STREAM	N	1	2	W	45
48 [illegible] 536	[illegible] 6216	WYOMING	526	209	TERRACE	[illegible]	ST. JONES	STREAM	Y	1	2	N	30
48 [illegible] 537	[illegible] 6217	WYOMING	525	188	TERRACE	[illegible]	ST. JONES	STREAM	Y	1	2	N	30
48 [illegible] 538	[illegible] 6218	WYOMING	524	177	TERRACE	[illegible]	ST. JONES	STREAM	Y	1	2	N	30

TABLE 15

CULTURAL - HISTORICAL DATA - WYOMING LAKE STUDY AREA

SITE NUMBER	PALEO	ARCHAIC	WOODLAND I	WOODLAND II	CT	AL	WN	LA	WE	TN	DP	SC	MG	HISTORIC	BIFACE	SCRAPER	FLAKE TOOL	CORE	FLAKES	GROUND STONE TOOL	FCR	CERAMICS
28C-551																	Y				Y	
28C-552																					Y	
28C-553																					Y	
28C-554																			Y			
28C-555																						
28C-556														Y		Y	Y				Y	
28C-557																	Y					
28C-558			Y												Y							
28C-559				Y											Y							
28C-560			Y												Y							
28C-561																			Y		Y	
28C-562																			Y			
28C-563	Y														Y				Y		Y	

Area 9 - Wyoming Lake Study Area - Subsurface Testing

Figure 34 shows the location of subsurface test units in Area 9 and Appendix VII lists the artifacts recovered from the test units. A 1 x 1 meter test unit was placed in the woods on the north bank of Isaac Branch, southwest of the surface finds, but produced only debitage. The context was undisturbed, however, so it was designated 7K-C-335.

In Subarea 9-5, the testing was confined to four 1 x 1 meter sub-surface test units placed along the bluff on the south side of Wyoming Lake and Isaac Branch. None had ever been historically plowed and three of the four produced undisturbed prehistoric materials. Sites C-336 and C-338 yielded debitage and charcoal to 80 cm below the surface and C-337 to 48 cm. In addition, C-338 produced a quartz Kessell Side-Notched-like biface from 48 cm below surface. Broyles (1971) has suggested a date of 8500 - 8000 B.C. for this point type. See Appendix VI for a soil profile of the unit at 7K-C-338.

Area 7 - Derby Pond Study Area - Surface Survey

Figure 35 shows the archaeological sites recorded and the subareas noted in the Derby Pond area. Locational attributes of the sites are listed in Table 16 and cultural historical data in Table 17. Derby Pond lies at the confluence of Red House Branch and Tidbury Creek, just west of Alternate U.S. 13 and the study area extends up the two streams and down Tidbury Creek from the Pond, approximately 2 kilometers in any direction. The streams are well dissected, producing steep bluffs along the banks. Five previously recorded sites were known for this study area: 7K-C-104 at Derby Pond, C-160 on the west side of Rt. 13, and E-5, E-9, and E-75 up Tidbury Creek from its confluence with Red House Branch. None of these sites were reexamined as part of this survey. For a variety of reasons, including no-till fields, advance crop growth, and residential tract housing, no pedestrian survey could be conducted in this study area. However, two test units were excavated and one of those produced prehistoric material.

Subareas 7-1, 7-2, and 7-3 These three subareas were comprised entirely of residential areas, orchards, no-till soybean fields, cabbage fields, and small woodlots and offered no visible ground surface.

Subarea 7-4 Comprised entirely of freshly plowed fields (unweathered, no visibility), cover crops, no-till corn, and woodlot, it afforded no visible ground surface.

Subarea 7-5 This was comprised entirely of barley, potato, and no-till corn fields and offered no surveyable fields.

FIGURE 34

Subsurface Test Locations – Wyoming Lake Study Area 9

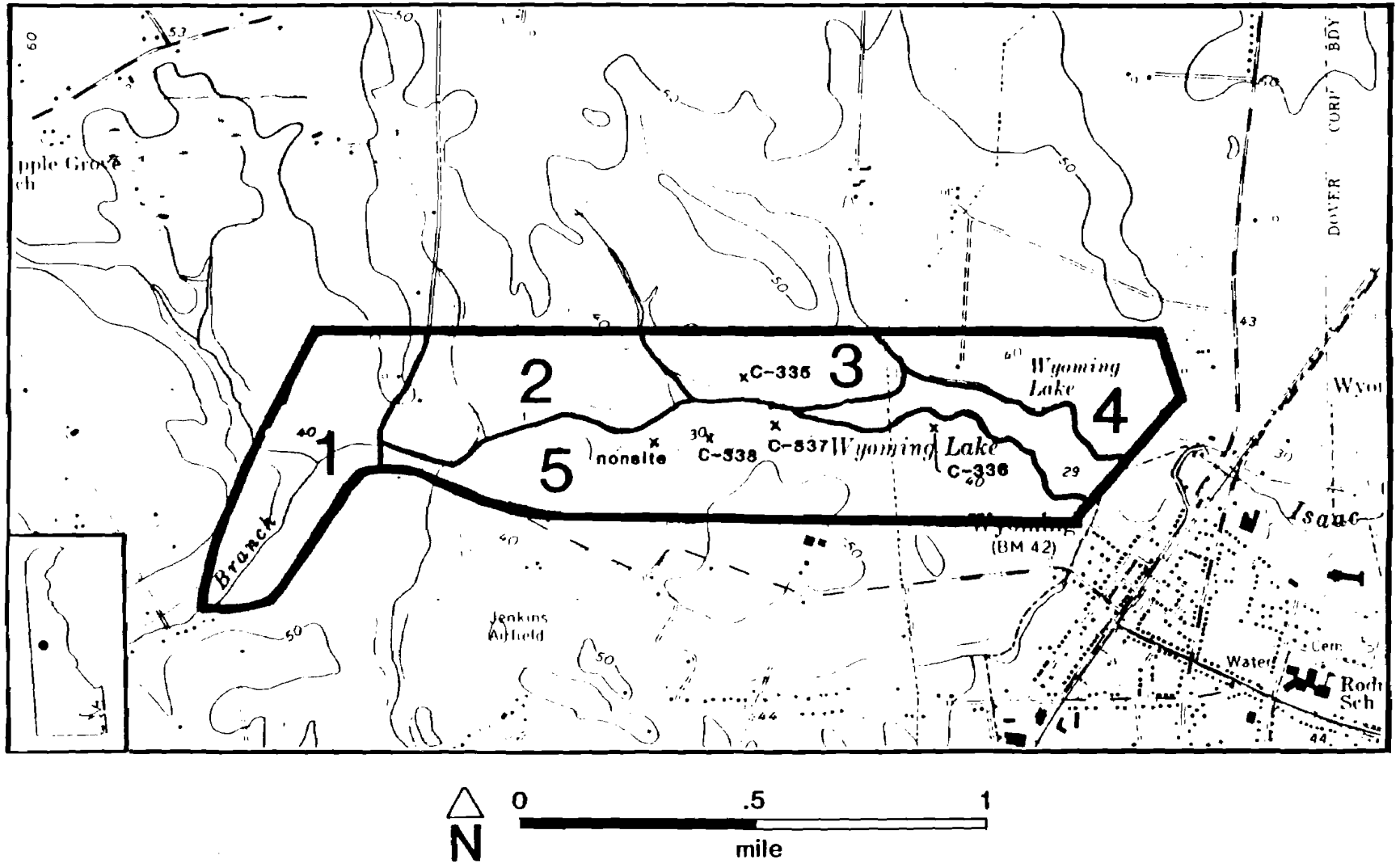


FIGURE 35

Sites and Subareas – Derby Pond Study Area 7

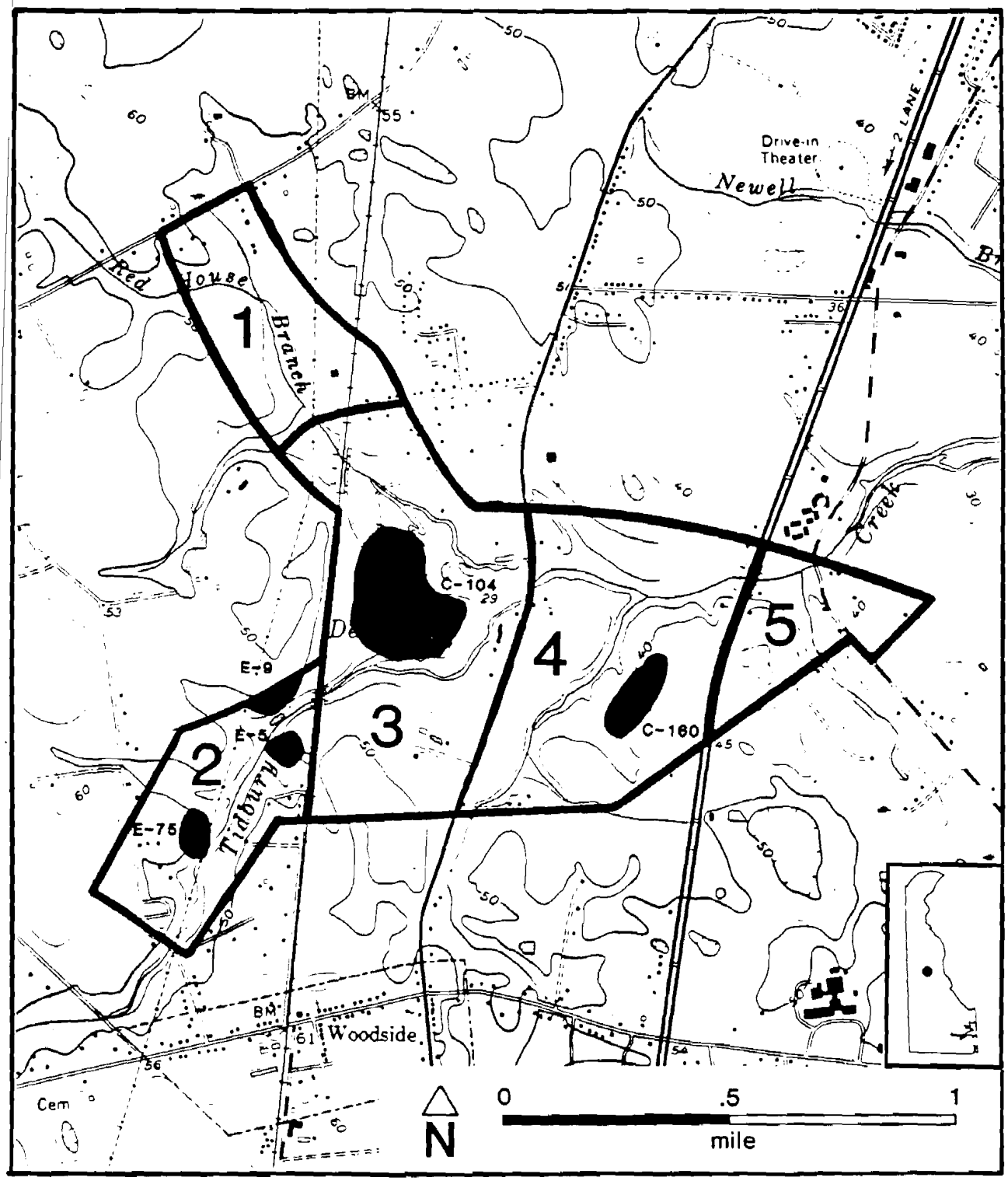


TABLE 14

LOCATIONAL DATA - PREHISTORIC RESOURCES - DERBY POND STUDY AREA

SITE NUMBER	LRS NUMBER	USGS QUAD	UTM NORTH	UTM EAST	GEOMORPHOLOGIC SETTING	PRIMARY SOIL SERIES	SECONDARY SOIL SERIES	DRAINAGE	SUBBASIN WATER SETTING	CONF.	WATER DISTANCE (METERS)	SLOPE	ASPECT	ELEVATION
[illegible]	[illegible]	WYOMING	405	252	RISE	[illegible]		[illegible]	MAJOR TRIBUTARY	Y	1	2	S	30

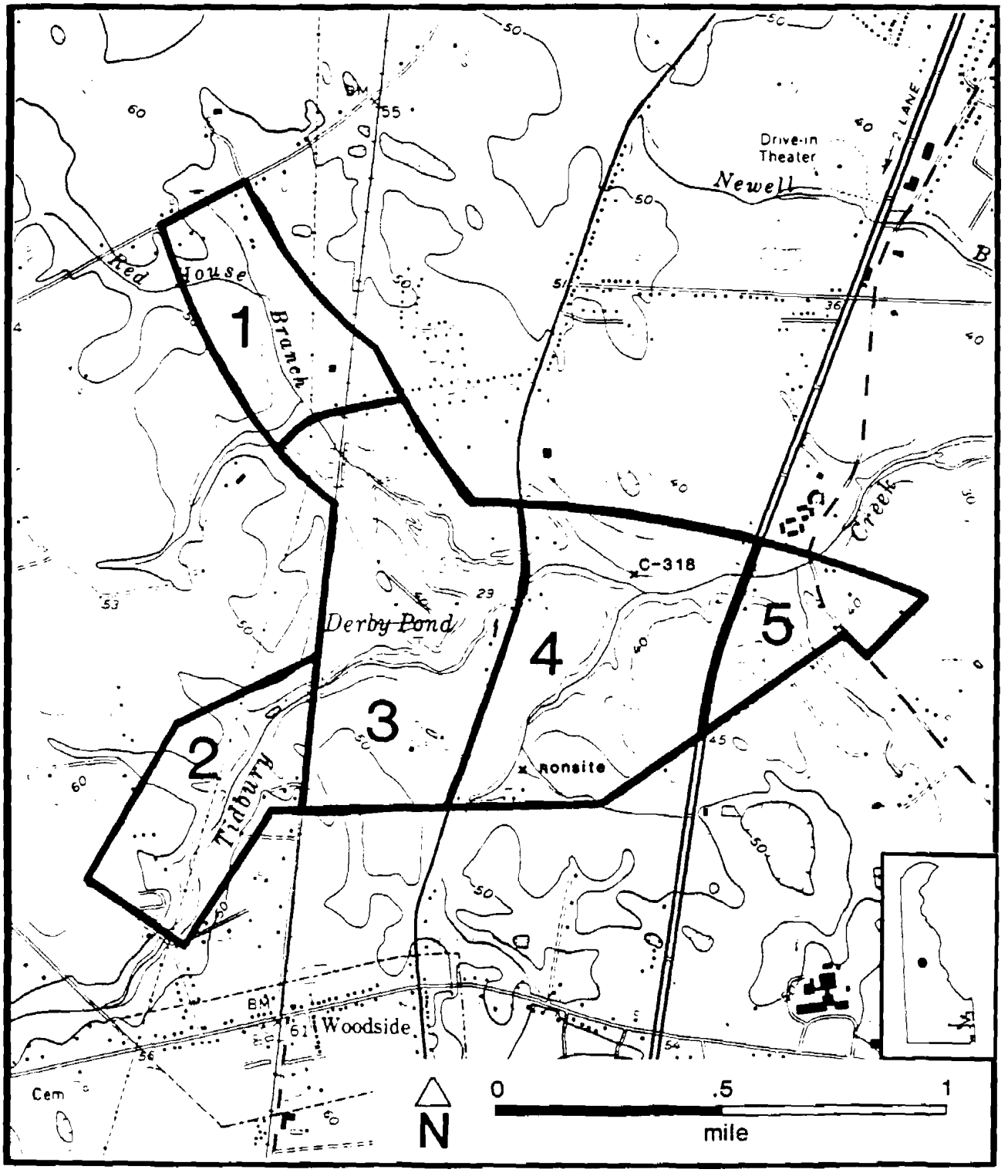
TABLE 17

CULTURAL HISTORICAL DATA MURRAY POND STUDY AREA

SITE NUMBER	PALEO	ARCHAIC	WOODLAND I	WOODLAND II	CE	BL	WN	FA	WA	DA	DP	SC	MC	HISTORIC	BIFACE	SCRAPER	FLAKE TOOL	CORE	FLAKES	GROUND STONE TOOL	FOR	CERAMICS
[illegible]																			Y		Y	

FIGURE 36

Subsurface Test Locations – Derby Pond Study Area 7



Area 7 - Derby Pond Study Area - Subsurface Testing

Figure 36 shows the location of sub-surface testing in this area and Appendix VII lists the artifacts recovered from the test units. Two 1 x 1 meter test units were placed in Subarea 7-4 in two separate woodlots. The first was on a bluff 5 meters above the confluence of two unnamed minor tributaries to Tidbury Creek. The woodlot had never been historically plowed. Despite these favorable conditions, the unit proved to be sterile. The second unit was placed on the north side of Tidbury Creek about 350 meters east of U.S. 13A and was situated on a 2 meter rise on the north bank of the Creek. Sixteen flakes, 24 FCR, charcoal, and charred nut fragments were found to a depth of 55 cm below the surface (Site 7K-C-318). See Appendix VI for a soil profile of this test unit.

Area 4 - Double Run/Spring Creek Study Area - Surface Survey

Figure 37 shows the archaeological sites recorded and the subareas noted in the Double Run/Spring Creek area. Locational attributes of the sites are listed in Table 18 and cultural historical data are listed in Table 19. This is the southernmost study area in the Rt. 13 Corridor, encompassing parts of the Spring Creek and Double Run tributaries of the Murderkill River northwest of Frederica, Delaware. It had been extensively surveyed in the early 1970s by Dan Griffith and Rich Artusy as part of the planning for an earlier Dover By-pass and large numbers of sites were recorded at that time which today lie within the study area limits. It was not deemed necessary to resurvey these sites as part of the present operation. Much of the remainder of the drainage's flanks are obscured by woodlot and no-till agriculture and thus the actual amount of ground which could be subjected to pedestrian survey was rather small. Nevertheless, 13 sites from this area were recorded, including 3 historical archaeological sites and 2 family cemeteries.

Subarea 4-1 This subarea lies on either side of Double Run on the north side of Kent 31 and was entirely woodlot and no-till corn at the time of the survey.

Subarea 4-2 Extending along both sides of Double Run, this subarea contains previously recorded sites 7K-F-52, 57, and 121, which were not reexamined as part of this survey. Most of the subarea is woodlot and could not be surveyed.

Subarea 4-3 This subarea was entirely no-till soybeans and barley and woodlot at the time of the survey and offered no ground suitable for pedestrian survey. Three previously recorded sites were located in the subarea, F-50, F-56 and F-58, but were not resurveyed for this project.

Subarea 4-4 This subarea lies northwest of the confluence of Double Run and Spring Creek and was all no-till and/or crops in an advanced growth state and offered little walkable surface. Only 2 sites were recorded (7K-F-144 and 145), both in the no-

FIGURE 37

Sites and Subareas – Double Run/Spring Creek Study Area 4

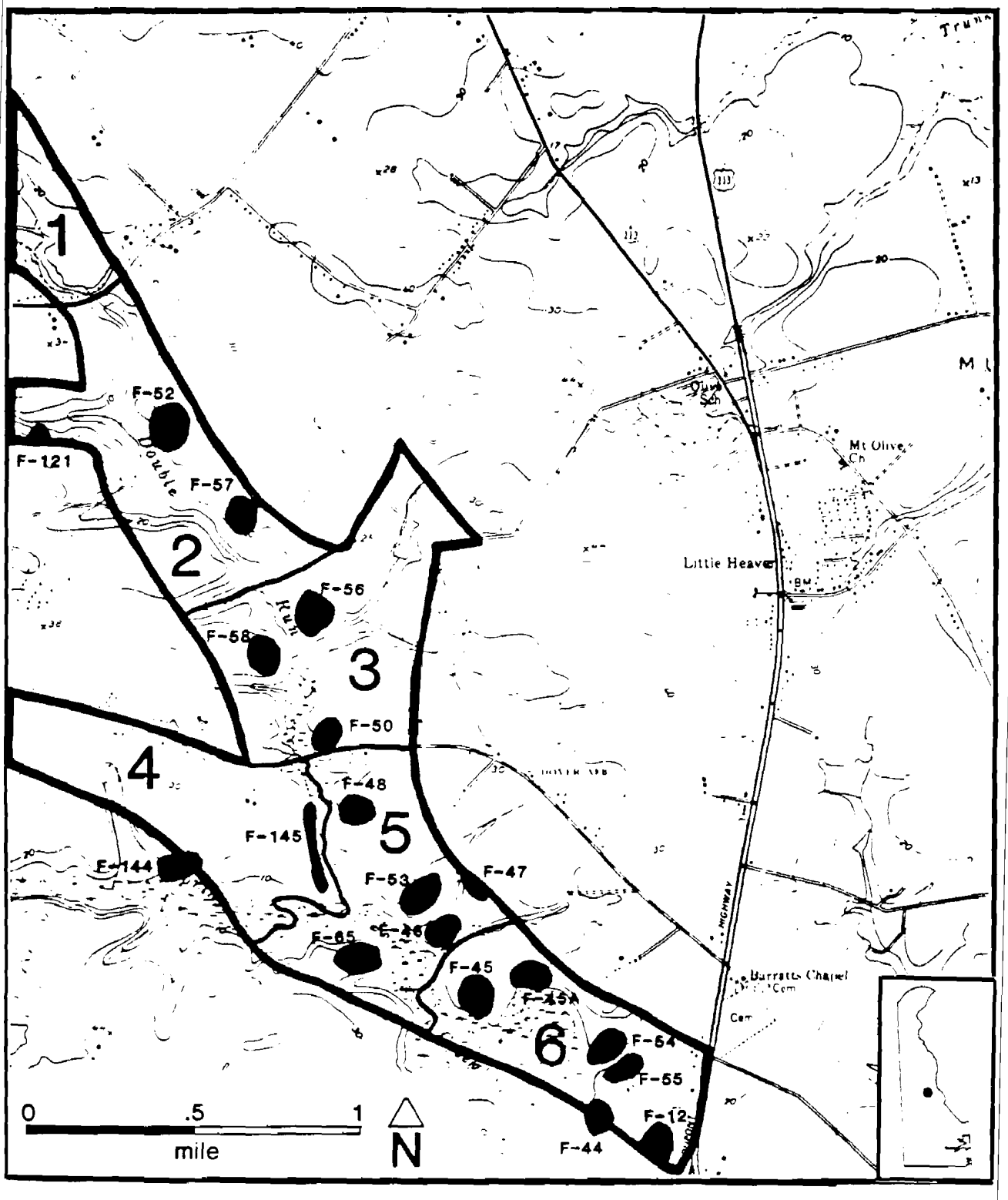


TABLE 13

LOCATIONAL DATA - PREHISTORIC RESOURCES - MURDERKILL/SPRING CREEK STUDY AREA

SITE NUMBER	CRS NUMBER	USGS QUAD	UTM NORTH	UTM EAST	GEOMORPHOLOGICAL SETTING	PRIMARY SOIL SERIES	SECONDARY SOIL SERIES	DRAINAGE	SURFACE WATER SETTING	CONF.	WATER DISTANCE (METERS)	SLOPE	ASPECT	ELEVATION
	K-6006	FREDERICA	261	11	LOW TERRACE	SaB		MURDERKILL	STREAM		4	2		18
[illegible]	K-6007	FREDERICA	254	13	LOW TERRACE	SaB		MURDERKILL	STREAM		0	2	O	12
[illegible]	K-6008	FREDERICA	255	14	TERRACE	SaB		MURDERKILL	STREAM	Y	1	2	S	15
[illegible]	K-6009	FREDERICA	260	9	LOW TERRACE	SaB		MURDERKILL	STREAM	N	2	2	W	15
	K-6041	FREDERICA	236	20	TERRACE	SaB		MURDERKILL	STREAM	N	4	2	E	20
[illegible]	K-6000	DOVER	551	301	RISE	SaB		LEIPSIC	STREAM	N	1	2	NW	10
[illegible]	K-6070	DOVER	534	345	LOW TERRACE	SaA		LEIPSIC	STREAM	N	0	0	SE	10
[illegible]	K-6092	FREDERICA	250	20	LOW TERRACE	Ua		MURDERKILL	STREAM	N	0	0		0
[illegible]	K-6093	FREDERICA	196	39	LOW TERRACE	E		MURDERKILL	STREAM	Y	4	0	E	30
[illegible]	K-6094	FREDERICA	204	34	TERRACE	Ea		MURDERKILL	STREAM	Y	4	0	N	30
[illegible]	K-6095	FREDERICA	204	25	TERRACE	SaB		MURDERKILL	STREAM	Y	3	2	N	30
[illegible]	K-6096	FREDERICA	189	46	TERRACE	SaB		MURDERKILL	STREAM	Y	3	2	NE	30
[illegible]	K-6097	FREDERICA	136	54	LOW TERRACE	SaB		MURDERKILL	STREAM	Y	1	2	E	10
[illegible]	K-6098	FREDERICA	142	40	LOW TERRACE	SaB		MURDERKILL	STREAM	Y	1	2	S	10

TABLE 1[illegible]

CULTURAL - HISTORICAL DATA - DOUBLE RUN/SPRING CREEK STUDY AREA

SITE NUMBER	PALEO	ARCHAIC	WOODLAND I	WOODLAND II	CE	OL	WN	CA	WH	MA	DE	SC	MG	HISTORIC	BIFACE	SCRAPER	FLAKE TOOL	CORE	FLAKES	GROUND STONE TOOL	FCR	CERAMICS
[illegible] 135														Y								
[illegible] 136			Y	Y	Y								Y		Y				Y		Y	Y
[illegible] 137			Y	Y	Y								Y	Y	Y		Y				Y	Y
[illegible] 138														Y								
[illegible] 139														Y								
[illegible] 140																			Y			
[illegible] 141																					Y	
[illegible] 142			Y	Y													Y		Y		Y	Y
[illegible] 143			Y	Y									Y		Y		Y		Y		Y	Y
[illegible] 144																	Y		Y		Y	
[illegible] 145																			Y		Y	

till corn field at the confluence, and both produced flakes and FCR in low quantities. Surface visibility on these sites was only about 1% and little can be said about their size or significance.

Subareas 4-5 and 4-6 These subareas were surveyed in 1972 by Daniel Griffith for a prior Dover By-pass. Numerous sites were recorded at that time and that work was considered sufficient for this Phase I survey. See Fig. 37 for the locations of these sites.

Area 4 - Double Run/Spring Creek Study Area - Subsurface Testing

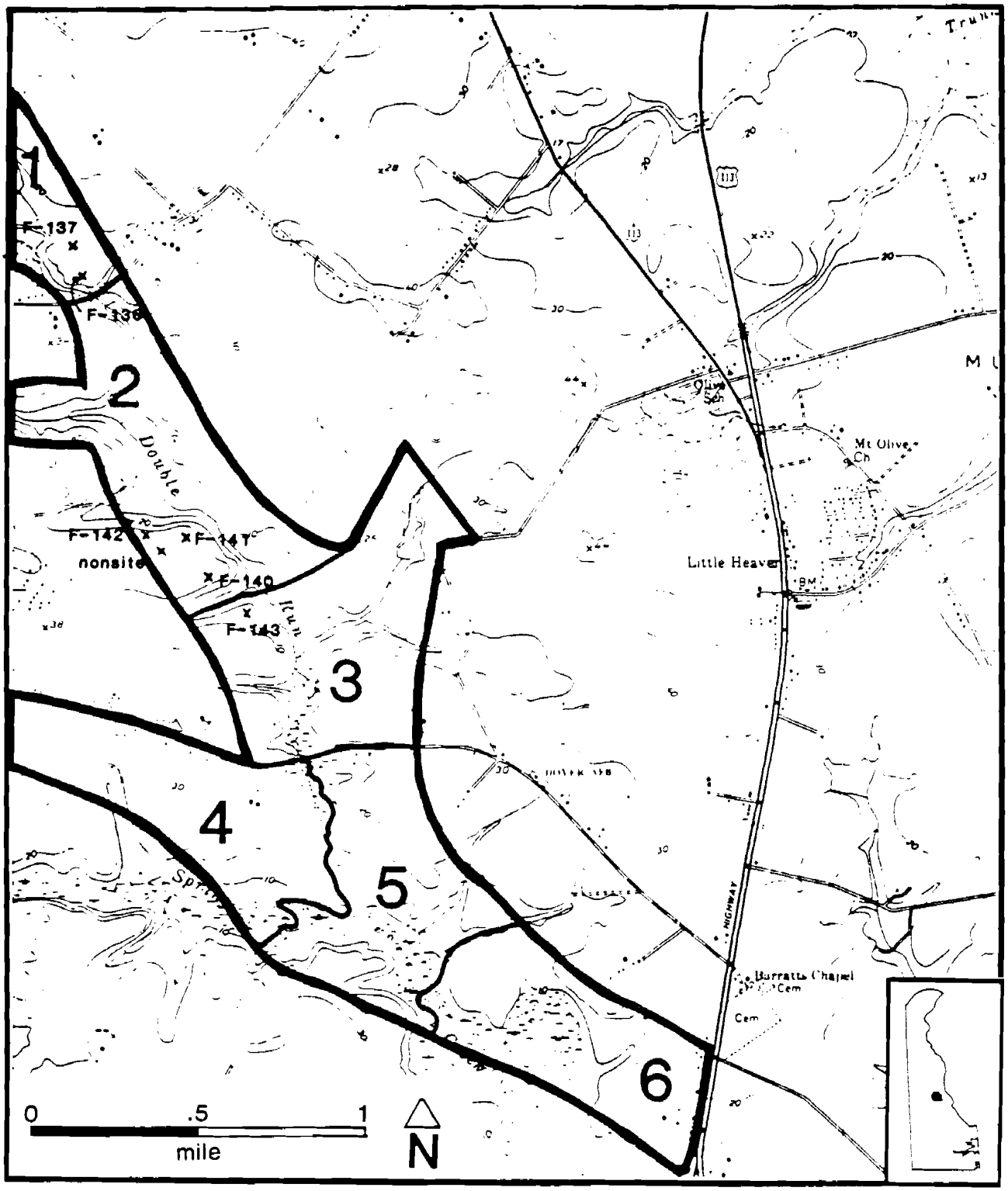
Figure 38 shows the location of subsurface tests in this area and Appendix VII lists the artifacts recovered from the test units. Two 1 x 1 meter test units were placed in Subarea 4-1 on the berm of the terrace on the northeast side of Double Run in Richard R. Baines' woodlot. Neither had ever been plowed. The first, labeled 7K-F-136, was placed on a 4 meter high bluff north at the confluence of Double Run and an unnamed tributary. The soil is well drained Sassafras sandy loam and the unit produced a quartzite Lehigh/Koens-Crispin broadpoint (Woodland I), Minguannan sherds (Woodland II) (Plate 6), flakes, charcoal, and FCR. The second unit was placed about 150 meters north of F-136 at another confluence of Double Run and a minor tributary and was designated 7K-F-137. It produced a Woodland I Bare Island/Lackawaxen stemmed point, more Minguannan ceramics, a flake tool (Plate 13), flakes, and charcoal.

Four 1 x 1 meter test units were placed in Subarea 4-2 on the top of the 7 to 8 meter high bluffs on the west bank of Double Run opposite previously recorded site F-57. Although these woodlots had never been historically plowed, one of the units was sterile and the remaining three produced only 1 or 2 flakes, charcoal, and FCR per unit (7K-F-140, F-141 and F-142). The paucity of artifacts may be explained by the suggestion that these bluffs were actually too high above the stream and impractical for use by prehistoric peoples, especially when compared with the more gradual slopes on the opposite side of the stream.

The only work done in the subarea 4-3 was a 1 x 1 meter test unit placed on the bluff top southwest of the confluence of Double Run and an unnamed tributary (7K-F-143). Unlike the previous units placed in similar settings just to the north in Subarea 4-2, this unit was quite productive. The unit was taken to 85 cm below the surface, with cultural material found to 75 centimeters. The only diagnostic artifacts found were undecorated Minguannan ceramics, while a red jasper biface tip was found at 70 cm and utilized and unutilized flakes, FCR, charcoal, and many carbonized nut hulls were found throughout. See Appendix VI for a soil profile of this test unit.

FIGURE 38

Subsurface Test Locations – Double Run/Spring Creek Study Area 4



HISTORIC SITE SURVEY RESULTS

This section of the report describes the survey of standing structures and potential historical archaeological sites in each of the nine project areas. The specific sites tested were those noted in the original Route 13 Corridor Planning Study (Custer et al. 1984: Appendix II, Appendix III). The purpose of this survey was to assess the archaeological potential of each standing structure and potential historic archaeological site as indicated by historic maps. These types of sites were field checked because the initial planning study noted only the presence of historic archaeological and standing structures located in the BAHP inventory files. This survey also located 11 previously unrecorded historic archaeological and standing structure locations. Each of these additional sites were then registered with the BAHP.

As noted in the initial description of the field research methods, a series of variables were recorded in order to indicate the state of site preservation, the possibility of the site having multiple functions, and the size and density of the archaeological resources. Specific variables recorded included 1) the number and type of original outbuildings extant, which was assumed to reflect the degree to which a site had multiple functions and exhibited a range of well-defined activity/functional loci; 2) the visible disturbance levels at the site which were assumed to indicate the degree of preservation of the archaeological site; and 3) the number and type of archaeological features present, which was assumed to reflect the size and density of the material culture present at the site. Visible archaeological features included foundation remains, wells, and cellar depressions. The archaeological potential was derived from a subjective weighting of these three variables. The tables presented below list the results of the field check including the archaeological potential of each location visited. Historic significance data contained were obtained from Appendices II and III of the initial planning report (Custer et al. 1984). The values for the historic significance and the archaeological potential were then averaged to produce an overall cultural resource potential. This assessment was considered to be the most important for the planning aspects of the present project.

Smyrna Study Area

Table 20 gives a summary description of the historic sites in the Smyrna area. Figure 39 shows the location of the standing structures in the area and Figure 40 shows the location of historical archaeological sites. The Smyrna Study Area includes part of Appoquinimink and Duck Creek Hundreds (Figure 3). In general, preservation is excellent in this area--only two standing structures (K-4023, K-4026) have been removed since inclusion in the BAHP files. Disturbance to archaeological sites, however, is more substantial--fully one-third of the 33 historic archaeological sites in the Smyrna area have a low potential for

Key to Tables 20-28

Site Number - CRS Number assigned by the SHPO (N####), or archaeological resource number from Custer et al. (1984: Appendix III)

Hundred - Hundred within which the site is located

USGS Quad - USGS 7.5' quadrangle within which the site is located

Date - Estimated date of the structure

Functions - One or more functions of the structure

AGBLG	-	Agricultural Outbuilding
AGCX	-	Agricultural Complex
AGMCX	-	Agricultural-Mill Complex
AGTEN	-	Agriclutural Tenant Dwelling/Farm
ALMHSE	-	Almshouse
BANK	-	Bank
BRID	-	Bridge
BSSH	-	Blacksmith/Whitesmith Shop
CAUWY	-	Causeway
CCBLG	-	Canal Company Building
CEM	-	Cemetary
CHUR	-	Church
COMM	-	Commerical Structure
DAM	-	Dam or Earthwork
DWCX	-	Dwelling Complex
EST	-	Estate
GMCX	-	Gristmill Complex
GOVBLG	-	Government Building
HISTD	-	Historic District
HOT	-	Hotel
INDTEN	-	Industrial Tenant
LANOP	-	Landing Operation
LMKILN	-	Lime Kiln
LTHSE	-	Lighthouse
MANUFY	-	Manufactory
MMCX	-	Multiple-Mill Complex
MWHSE	-	Migrant Worker House
PEACH	-	Peach House
PEAORC	-	Peach Orchard
PHYS	-	Physician's Office
PLANT	-	Plantation
PO	-	Post Office
RR	-	Railroad Bed
RRR	-	Railroad-related
RRSTA	-	Railroad Station
RT	-	Racetrack
SCH	-	School
SCOSTA	-	Stagecoach Station
SERVST	-	Service Station

SLAVQ - Slave Quarters
SMCX - Sawmill Complex
SOMCX - Sorghum Mill Complex
STO - Store
STRUC - Structure
TAV - Tavern, Inn
TENANT - Tenant House
VESSEL - Vessel(sunken)
WARE - Warehouse
WKDW - Worker Dwelling
WKSH - Workshop

Historic Signif. - Historic Significance of the Site
H - High
M - Medium
L - Low
U - Unknown

Disturb. - Disturbance to the Site
DET - Deteriorated
E - Erosion
L - Landscaping
MD - Machine Disturbance ie. grading, other earth moving
P - Plowing - Total, Partial, Not Plowed (TP, PP, NP)
ROS - Removal of Residence Structure
SA - Structure Altered
UN - Undisturbed

Number of Type of Extant Outbuildings - Number of Outbuildings on the Site and Type of Extant Outbuildings.
A - Agricultural Implements
B - Granary
C - Corn Crib
D - Animal Shed
E - Summer Kitchen
F - Smoke House
G - Ice House
H - Milk House/Seperator Shed
I - Dairy Barn
J - Other Barn (Bank, etc.)
K - Carraige Shed
L - Misc. Shed
M - Pump House
N - Garage
O - Chicken House
P - Spring House
Q - Root Cellar/Dry Cellar
R - Tenant House
S - Piers and Docks
T - Windmill
U - Silos

Number and Type of Known Archaeological Features - Number of Features on the Site and Type of Features present.

CH	-	Cellar Hole
CM	-	Cemetery
D	-	Dam/Earthenwork
FN	-	Foundation
OD	-	Other Depression
PR	-	Privy Hole
W	-	Well
U	-	Unknown

Archaeo. Potent. - Archaeological Potential of the Site

H	-	High
M	-	Medium
L	-	Low
U	-	Unknown

Total Resource Potent. - Total Resource Potential is the combined average of the Historic Significance and Archaeological Potential of the Site.

H	-	High
M	-	Medium
L	-	Low

SMYRNA STUDY AREA HISTORIC SITES SUMMARY DESCRIPTION

SITE NUMBER	NUMBERED	USGS QUAD	DATE	FUNCTION			DIAGNOS.	ARCHAEO. POTENT.	HISTORIC SIGNIF.	OUTBUILDINGS	ARCHAEO. FEATURES	TOTAL RESOURCE POTENT.
361	BLACKBIRD	CLAYTON	P1849	RR			RDS,TF	L	L	0	0	L
408	BLACKBIRD	SMYRNA	P1849	AGEX			UN	H	H	L4,O1,J1	W1	H
414	BLACKBIRD	SMYRNA	1849-68	AGEX			RDS,MD,L	I	H	N1,L1,J1	W2,W?	M
415	BLACKBIRD	SMYRNA	1849-68	AGTEN			RDS,TF	M	H	0	0	H
417	BLACKBIRD	SMYRNA	1849-68	AGTEN			RDS,TF	M	H	0	0	H
418	BLACKBIRD	SMYRNA	P1849	COMM	DWEX		RDS,MD,F	I	H	0	0	H
419	BLACKBIRD	SMYRNA	P1849	COMM	DWEX		RDS,MD,L	I	H	0	0	H
420	BLACKBIRD	SMYRNA	P1849	COMM	DWEX		RDS,MD,F	I	H	0	0	H
421	BLACKBIRD	SMYRNA	1849-68	MANUFY			RDS,TF,F	L	H	0	0	M
426	BLACKBIRD	SMYRNA	P1849	HSEX			UN,L	M	H	L1	W1,OD1	H
427	BLACKBIRD	SMYRNA	1849-68	MANUFY			RDS,TF	L	H	0	0	M
428	BLACKBIRD	SMYRNA	1868-93	INDTEN			RDS,TF	M	H	0	0	H
429	BLACKBIRD	SMYRNA	P1802	LANDF			RDS,I	I	H	0	0	H
430	DUCK CREEK	SMYRNA	P1849	LANDF			RDS,I	I	H	0	0	M
431	DUCK CREEK	SMYRNA	P1868	INDTEN			RDS	M	H	0	0	H
432	DUCK CREEK	SMYRNA	P1868	INDTEN			RDS,I	U	H	0	0	H
433	DUCK CREEK	SMYRNA	P1868	MANUFY	LANDF	WARE	RDS,MD	M	H	0	0	H
434	DUCK CREEK	SMYRNA	P1868	WARE			RDS,MD	M	H	0	OD?	H
435	DUCK CREEK	SMYRNA	P1868	WARE			RDS,MD	M	H	0	OD1	H
436	DUCK CREEK	SMYRNA	P1868	WARE			RDS,MD	I	H	0	0	M
437	DUCK CREEK	SMYRNA	P1868	WARE			RDS,MD	I	H	0	0	M
438	DUCK CREEK	SMYRNA	P1868	WARE			RDS,MD	L	H	0	0	M
439	DUCK CREEK	SMYRNA	P1868	WARE			RDS,MD	U	H	0	0	H
440	DUCK CREEK	SMYRNA	P1868	WARE			RDS,MD	U	H	0	0	H
441	DUCK CREEK	SMYRNA	P1868	HSEX			RDS,TF	M	H	0	0	M
442	DUCK CREEK	SMYRNA	P1868	AGTEN			RDS,TF	M	H	0	0	H
443	DUCK CREEK	SMYRNA	P1868	AGTEN			RDS,TF	M	H	0	0	H
444	DUCK CREEK	SMYRNA	P1868	AGTEN			RDS,MD,1	I	H	0	0	H
445	DUCK CREEK	SMYRNA	P1868	AGEX			RDS,I	M	H	0	0	H
446	DUCK CREEK	SMYRNA	P1868	DWEX			RDS,I	M	H	0	0	H
447	BLACKBIRD	SMYRNA	1868-93	INDTEN			UN	H	H	L1	0	H
448	DUCK CREEK	SMYRNA	P1868	HSEX	MANUFY		RDS	H	H	0	0	H
K-002	DUCK CREEK	SMYRNA	P1849	LANDOF			RDS,F	M	H	0	ENT	H
K-0033	DUCK CREEK	SMYRNA	1740	HSEX			UN,I	H	H	I1,J1,M1,PR1,L4,A2,N2,R1	W1,OD1	H
K-0034	DUCK CREEK	SMYRNA	L19 C	MSTEN			RDS,I	H	H	0	OD1	H
K-0036	DUCK CREEK	SMYRNA	C1850-19	AGEX			UN	H	H	L1,N1	0	H
K-0038	DUCK CREEK	SMYRNA	M19 C-19	AGEX			UN	H	H	L1	0	H
K-0039	DUCK CREEK	SMYRNA	E-M19C	AGTEN			UN	H	H	I1,A1,L3,R1	0	H
K-0040	DUCK CREEK	SMYRNA	E19 C	AGEX			UN	H	H	A1	OD1	H
K-0041	DUCK CREEK	SMYRNA	E-M19 C	AGEX			UN	H	H	J2,L3,N1,O1	W2	H
K-0042	DUCK CREEK	SMYRNA	M19 C	DWEX			UN,I	H	H	N1,L1	OD1	H
K-0043	DUCK CREEK	SMYRNA	C1800	DWEX			DET	M	H	0	0	H
K-0044	DUCK CREEK	SMYRNA	E-M19 C	DWEX			UN	H	H	A1,J1	OD?	H
K-0045	DUCK CREEK	SMYRNA	E-M19 C	DWEX			UN	H	H	L1,N2	0	H
K-0046	DUCK CREEK	SMYRNA	C1940	DWEX			UN	H	L	L1	0	M
K-0047	DUCK CREEK	SMYRNA	E-M19 C	DWEX			UN,J1	H	H	N1	0	H
K-0048	DUCK CREEK	SMYRNA	M-L19 C	DWEX			UN	H	H	A1,L2	W1	H
K-0049	DUCK CREEK	SMYRNA	E-M19 C	DWEX			UN	H	H	N1,L1	0	H
K-0050	DUCK CREEK	SMYRNA	M19 C	DWEX			DET	H	H	L1	PR1	H
K-0051	DUCK CREEK	SMYRNA		DWEX			UN	H	H	L1,A1	0	H
K-0052	DUCK CREEK	SMYRNA	1846	FU	STO		UN	H	H	N1	OD1	H
K-0053	DUCK CREEK	SMYRNA	E-M19 C	DWEX			RDS,I	M	M	0	0	M
K-0054	DUCK CREEK	SMYRNA	E-M19 C	DWEX			DET	H	H	E1,O1	W1	H
K-0055	DUCK CREEK	SMYRNA	E19 C	DWEX	LM KILN		UN	H	H	W1	0	H
K-0056	DUCK CREEK	SMYRNA	L18 C	DWEX	MANUFY		RDS	H	H	PR1,L5	0	H
N1-2	BLACKBIRD	SMYRNA	1800	AGEX			DET	H	H	J1,A3,L1,T1	0	H
N133	BLACKBIRD	SMYRNA	1849	PENCH			DET,UN	H	H	A3,M1,O1,L2	W1,PR1	H
N134	BLACKBIRD	SMYRNA	L18 C	AGEX			UN	H	H	J1,C2,L1,N1	0	H
N135	BLACKBIRD	SMYRNA	C1761	STO	HOT WARE		DET,UN	H	H	0	0	H
N1-2??	BLACKBIRD	SMYRNA		STRUC			RDS,MD	M	U	0	U2	H
N1-46	BLACKBIRD	SMYRNA	1849-68	AGEX			UN,L	H	H	A1,L3,M1	W1	H
N1-?01	BLACKBIRD	SMYRNA	P1849	AGEX			UN	H	H	A1,I1,J1,O3,L2	0	H
N105	DUCK CREEK	SMYRNA	1753	DWEX			UN	H	H	0	0	H

FIGURE 39

Standing Structures from BAHP Files – Smyrna Study Area 12

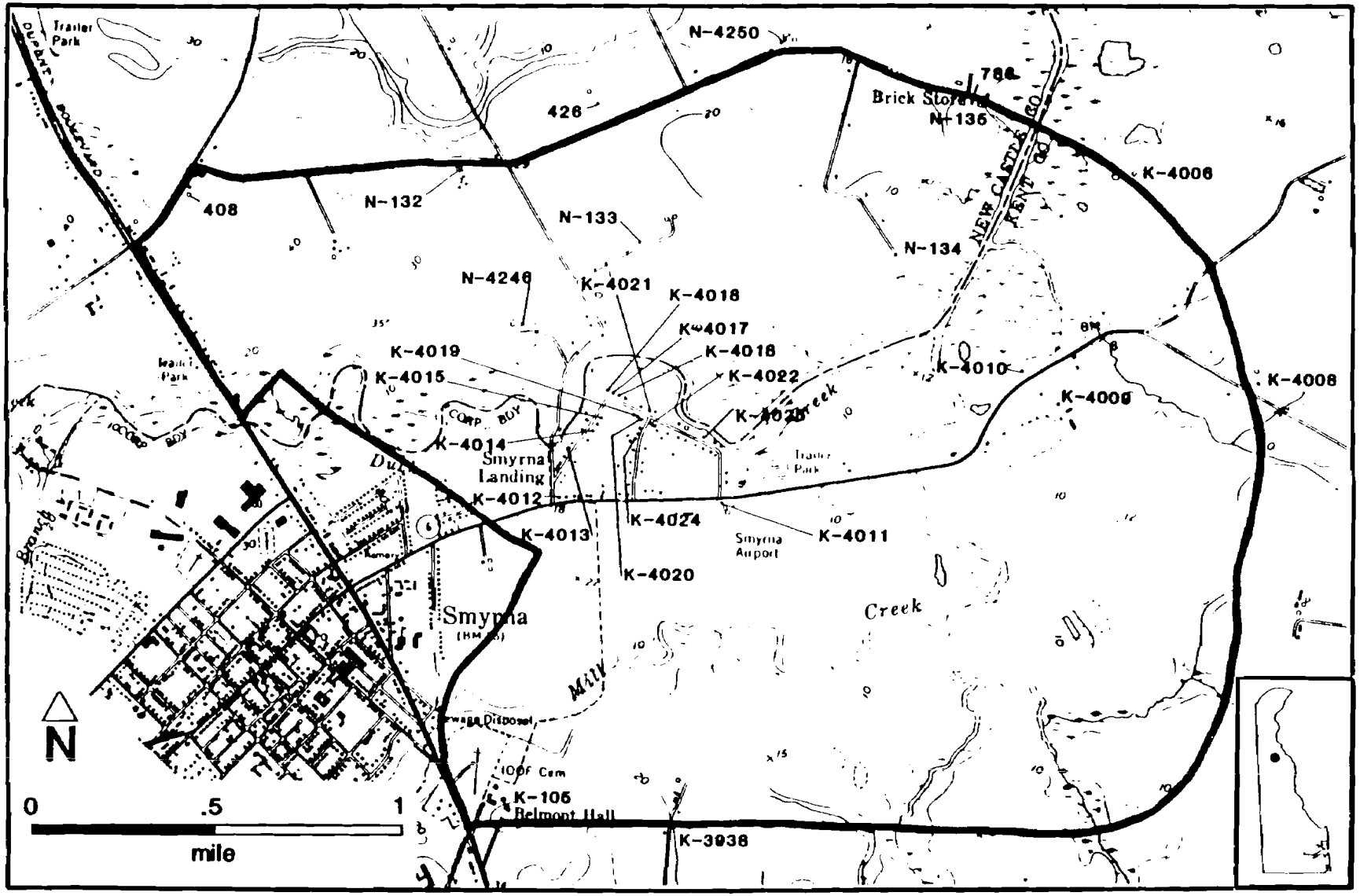
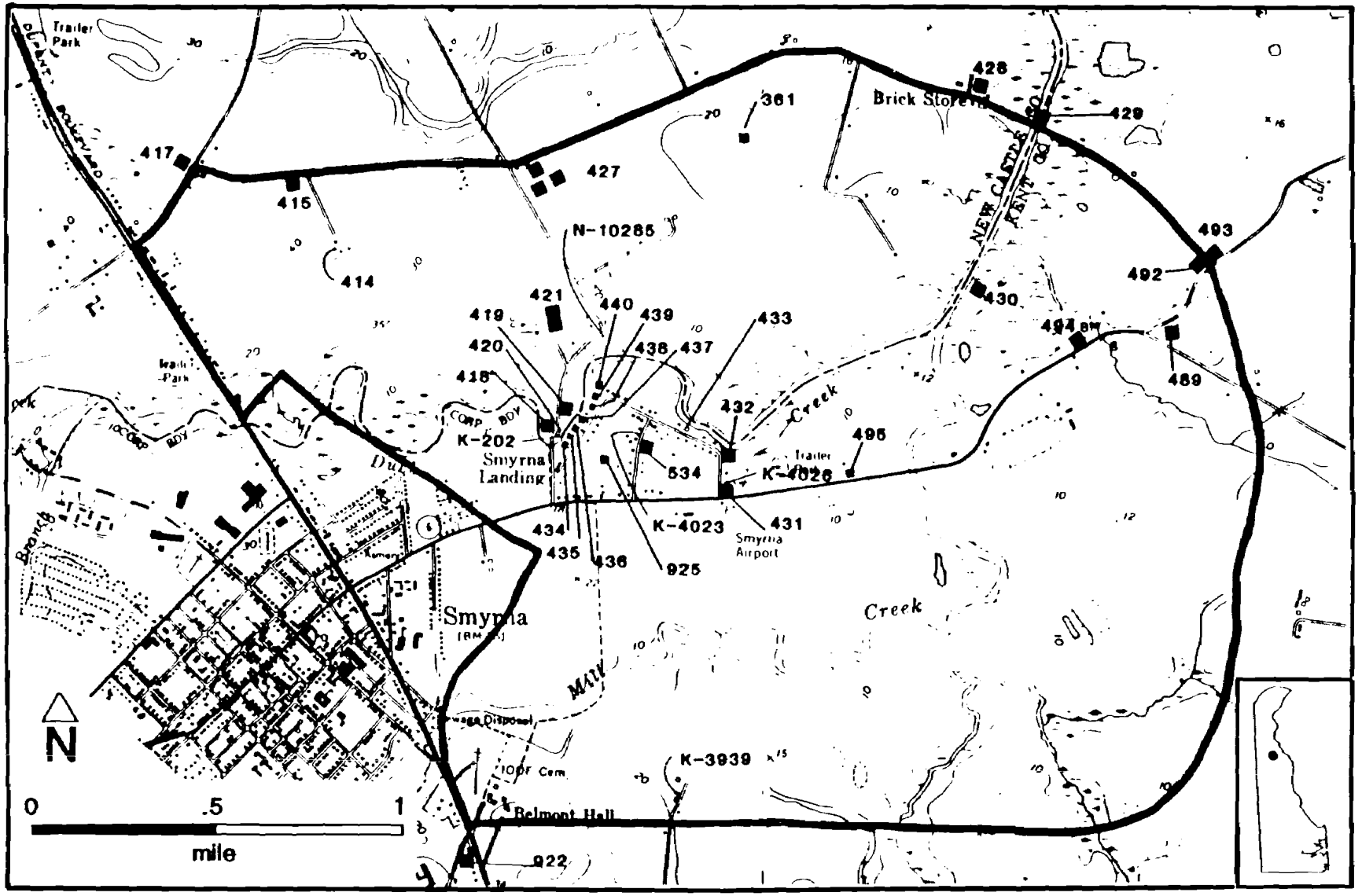


FIGURE 40

Historical Archaeological Resources Data – Smyrna Study Area 12



intact subsurface features.

The Smyrna area is the largest and most complex of any the study areas. The range of site types includes both agricultural types (agricultural complexes, tenant residences) and commercial types (warehouses, manufactories, landing operations). Two groups of historic site types were given a high overall cultural resource potential.

The first group of historic sites with significant cultural potential are the dwelling and commercial sites along Smyrna Landing. Over 30 historic locations have been located in this area along Duck Creek including early eighteenth to mid twentieth century dwelling complexes (i.e K-4013, K-4016); commercial structures (418-420); warehouses (433-440); landing operations (i.e 433, K-202) and lime kilns (i.e. K-4025). Data recovered from these commercial sites could provide a foundation for future work in Delaware and surrounding states. Comparing these commerical sites with sites of similar function, but in more urban contexts could also yield significant historic and archaeological information.

The second group of historic sites given a high overall cultural resource potential are 13 mid-eighteenth to early twentieth century agricultural complex locations. Each of these sites is undisturbed and offers a high potential for intact subsurface features. The survey located visible archaeological features for seven of the locations. Associated with these large agricultural complexes are six agricultural tenant sites, two of which (K-3939 and K-4009) are standing structures. All six of these tenant sites have a high potential for intact archaeological features.

Two other standing structures deserve special mention in the Symrna area. The first is a pre-1849 "peach house" (N-133) (Plate 19). Although perhaps more accurately a "wheat house," this structure is in good repair and is almost completely undisturbed (see Plate 20). A number of original outbuildings also exist, including three implement sheds, a pumphouse, and a chicken house. Two archaeological features were located on this property and the potential for more subsurface features is excellent. This site offers the potential for the recovery of significant information on the material culture of these large agricultural estates and their role in local, state and regional history.

The second significant standing structure is a ca. 1761 brick structure, known locally as the "Brick Store." Although deteriorated and bounded on one side by tidal marsh, the Brick Store has served as a store, hotel, landing operation, and warehouse. Data from this site would yield information of the role of local economic centers in the development and patterning of eighteenth century agricultural communities.

PLATE 19

Anvilstone from Site 7NC-J-143 in the Route 13 South Survey

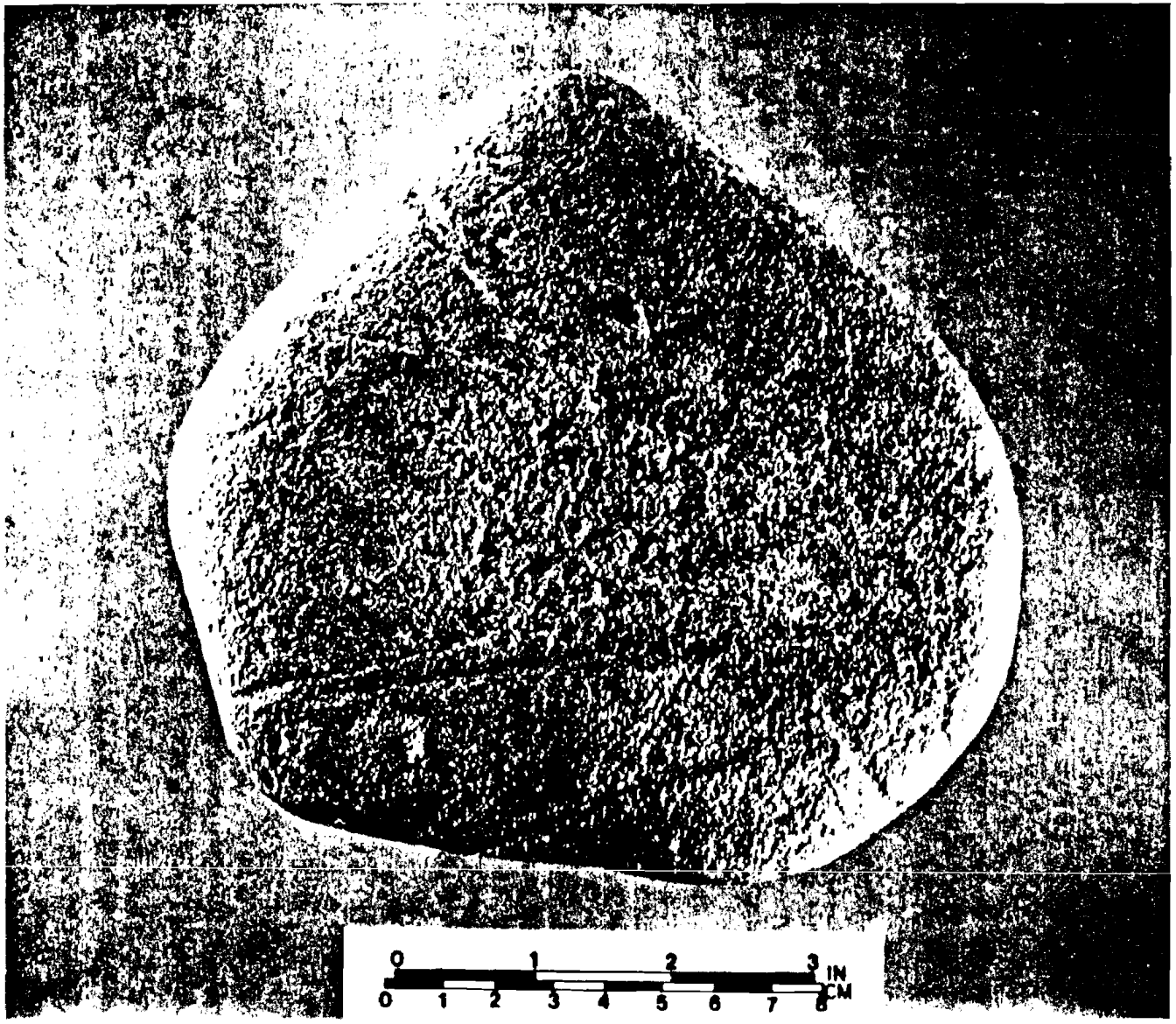


PLATE 20

Standing Structure N-133, Looking East from Kent 485

Leipsic Study Area

Table 21 provides a summary description of the historical archaeological and standing structure sites in the Leipsic area. Figure 41 shows the location of the standing structures in the area and Figure 42 shows the location of the historical archaeological sites. The Leipsic Study Area includes parts of Little Creek, Kenton, and Duck Creek Hundreds (Figure 3). In general, the sites within this area are well preserved, with only two standing structures (K-238, K-1393) removed since inclusion in the BAHP files. The historic archaeological sites also have been only moderately disturbed. Four of the 19 historic archaeological sites in this area have visible features.

The Leipsic area contains seven mill sites, both as standing structures and archaeological sites. This is more than in any other study area. Two of the mills (K-833, K-1395) date from the early to mid-nineteenth century and are still standing and in very good condition. Both structures offer high archaeological potential and may contain undisturbed subsurface features. Mills are especially significant in this area along the Leipsic River and its tributaries and data recovered from them would provide useful information on the role of local processing centers in rural community development.

A second series of sites given a high cultural resource potential were three extant agricultural tenant houses (K-1613, 1627, K-1628). Each of these standing structures are in fair to good condition and are associated with visible archaeological features. Generally agricultural tenant houses are not well preserved along the proposed Corridor and these three structures, especially because of their proximity to each other, offer the potential for the recovery of significant comparative data with other tenant structures in Delaware. Similarly, four archaeological sites, tenatively identified as industrial tenant residences are in this study area.

A third group of sites was given a high cultural resource potential. A number of mid eighteenth and nineteenth century agricultual complexes, both as standing structures (K-1398, K-1376, K-1385, K-1613, K-3946) and historical archaeological sites (591, 595) have been identified. Each of these sites is relatively undisturbed and is associated with visible archaeological features.

Dyke and Muddy Branches Study Area

Table 22 provides a summary description of the historic sites in the Dyke and Muddy Branches area. Figure 43 gives the location of the standing structures in the area and Figure 44 gives the location of historical archaeological sites. This study area is located in Little Creek Hundred (Figure 3). Preservation is fair to good; three-quarters of the identified historical archaeological sites have been significantly disturbed. Three of

TABLE 21

LEIPSIC STUDY AREA HISTORIC SITES - SUMMARY DESCRIPTION

SITE NUMBER	HUNDRED	USGS QUAD	DATE	FUNCTIONS	DISTURB.	ARCHAEO. POTENT.	HISTORIC SIGNIF.	OUTBUILDINGS	ARCHAEO. FEATURES	TOTAL RESOURCE POTENT.
425	DUCK CREEK	DOVER	P1868	AGTEN	RUS,TP	M	H	0	0	H
426	LITTLE CREEK	DOVER	1802-50	GMCS	RUS	H	H	0	0	H
427	DUCK CREEK	DOVER	1868	AGTEN	RUS,MD,TP	M	M	0	0	M
548	KENTON	KENTON	P1868	AGTEN	RUS,TP	M	H	0	0	H
549	KENTON	KENTON	P1850	SCH	RUS,TP	M	H	0	0	H
550	KENTON	KENTON	P1868	CST	RUS,MD	L	L	0	0	L
551	KENTON	DOVER	P1868	CST	RUS	H	M	I1,L3,A1,J1	0	H
552	KENTON	DOVER	P1868	GMCS	DET	H	H	0	0	H
555	KENTON	KENTON	P1868	TNDTEN	UN	H	H	L1,J1	0	H
556	KENTON	KENTON	1802-50	SMCS	RUS	H	H	0	0	H
557	KENTON	KENTON	1802-50	GMCS	RUS	M	H	0	0	H
559	KENTON	DOVER	1868	TNDTEN	RUS,TP	L	M	0	0	M
561	KENTON	DOVER	1868	AGTEN	RUS,MD	L	L	0	0	M
583	LITTLE CREEK	DOVER	P1868	TNDTEN	RUS,TP	M	M	0	0	M
584	LITTLE CREEK	DOVER	P1868	TNDTEN	RUS,TP	L	M	0	0	M
585	LITTLE CREEK	DOVER	P1868	CH	RUS,MD,I	H	H	0	FN1	H
586	LITTLE CREEK	DOVER	P1850	CHUR CEM	RUS,TP	H	H	0	OD1	H
591	LITTLE CREEK	DOVER	P1868	AGCS	RUS,TP	M	H	0	0	M
595	LITTLE CREEK	DOVER	P1868	AGCS	RUS	H	H	0	0	H
K298	DUCK CREEK	DOVER	1774	AGMCS	RUS,MD,TP	M	H	0	0	H
K913	LITTLE CREEK	DOVER	P1868	GMCS	UN	H	H	J1,L2	0	H
K1261	KENTON	KENTON		DWCS	UN	H	H	N1	0	H
K1349	KENTON	KENTON	KENTON	AGCS	UN	H	H	C1,I1,J2,L3	0	H
K1326	KENTON	DOVER	C1850-60	AGCS	UN,TP	H	H	N1	OD1	H
K1383	KENTON	DOVER	P1868	AGCS	UN	H	H	J1,N1,A1,L1	0	H
K1385	KENTON	DOVER	P1868	AGCS	UN	H	H	I1,O1,J1,M1,A2	W2	H
K1386	KENTON	DOVER	C1860	AGCS	UN	H	M	L1,A1,R1,N2	0	H
K1393	KENTON	DOVER	C1875	AGCS	RUS,TP	M	M	0	0	M
K1394	KENTON	DOVER	P1868	AGCS	UN	H	H	I1,L2,N1,J1,D1,A1	0	H
K1395	KENTON	DOVER	P1802	AGMCS	UN,MD	H	H	L1	0	H
K1396	KENTON	KENTON	C1780-90	CST	UN	H	H	A1,J1,I1,M1	W1	H
K1398	KENTON	KENTON	C1750-60	AGCS	UN	H	H	I1,J1,R1,L6,O1,M1,A1,E1	W1	H
K1613	LITTLE CREEK	DOVER	P1868	AGTEN	UN	H	H	A2	W1	H
K1627	LITTLE CREEK	DOVER	P1868	AGTEN	DET	H	H	L2,PR1	PR1,W1	H
K1628	LITTLE CREEK	DOVER	P1868	AGTEN	DET,TP	M	M	PR1	OD1	M
K1632	LITTLE CREEK	DOVER	P1868	AGCS	UN	H	H	I3,A2	0	H
K2065	LITTLE CREEK	DOVER	P1868	AGCS	DET,TP	M	H	L2,J1,PR1	0	H
K2068	LITTLE CREEK	DOVER	P1868	AGCS	UN	H	H	I1,J1,L1,N1	0	H
K3165	LITTLE CREEK	DOVER	P1868	AGCS	UN	H	H	J1	0	H
K3161	LITTLE CREEK	DOVER	P1868	CST AGCS	UN	H	H	N1	OD1	H
K3026	DUCK CREEK	DOVER	E20 C	DWCS	MD	L	L	0	0	L
K3946	DUCK CREEK	DOVER	M19 C	AGCS	UN	H	H	A1,N1,C1	OD1,FN1	H
K6411	LITTLE CREEK	DOVER	19 C	STBUC	RUS,TP	M	H	0	FN2	H
[illegible]	KENTON	DOVER	19 C	STRUN	RUS,TP,E	M	H	0	0	H

FIGURE 41

Standing Structures from BAHP Files – Leipsic Study Area 3

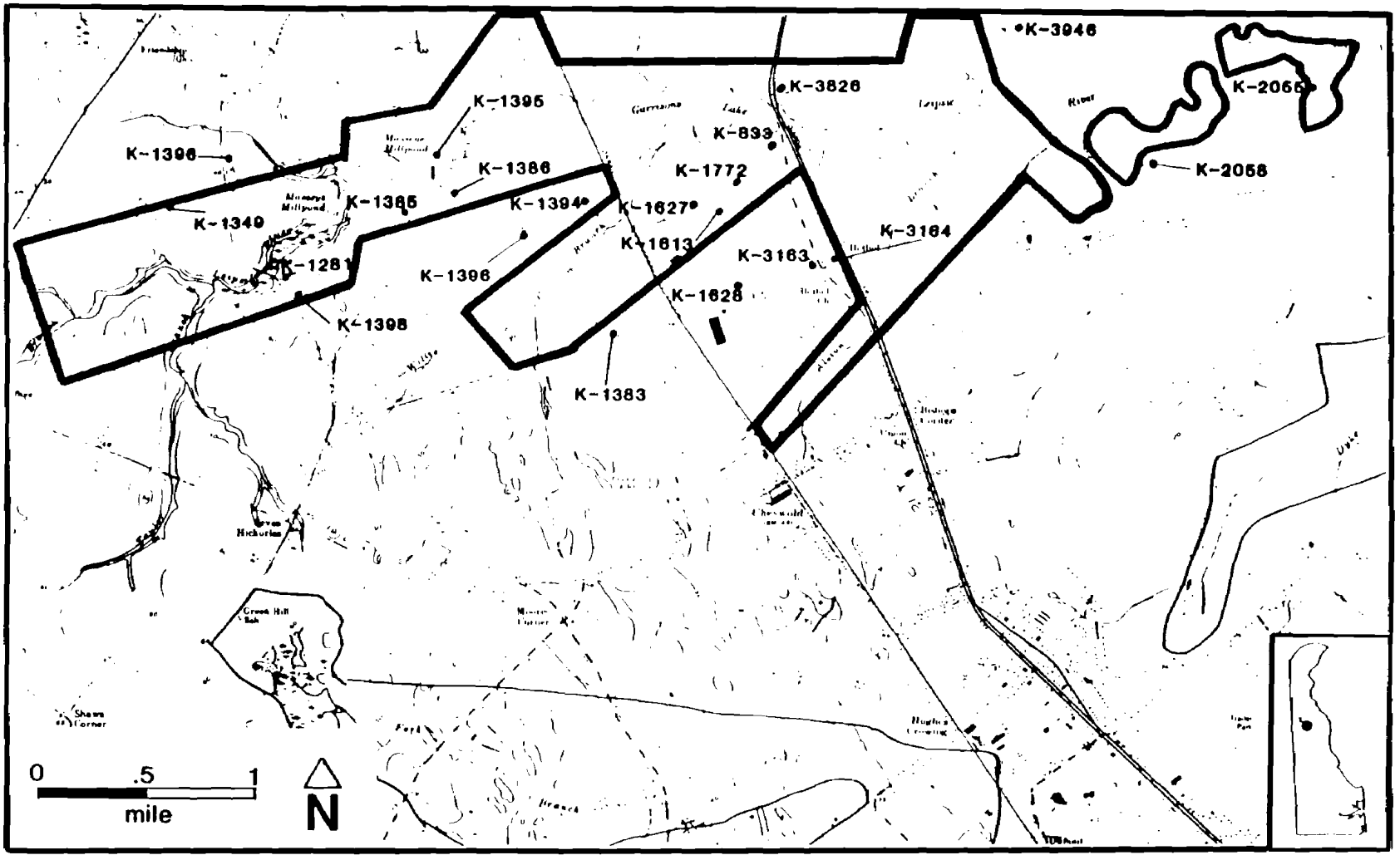


FIGURE 42

Historic Archaeological Resources Data – Leipsic Study Area 3

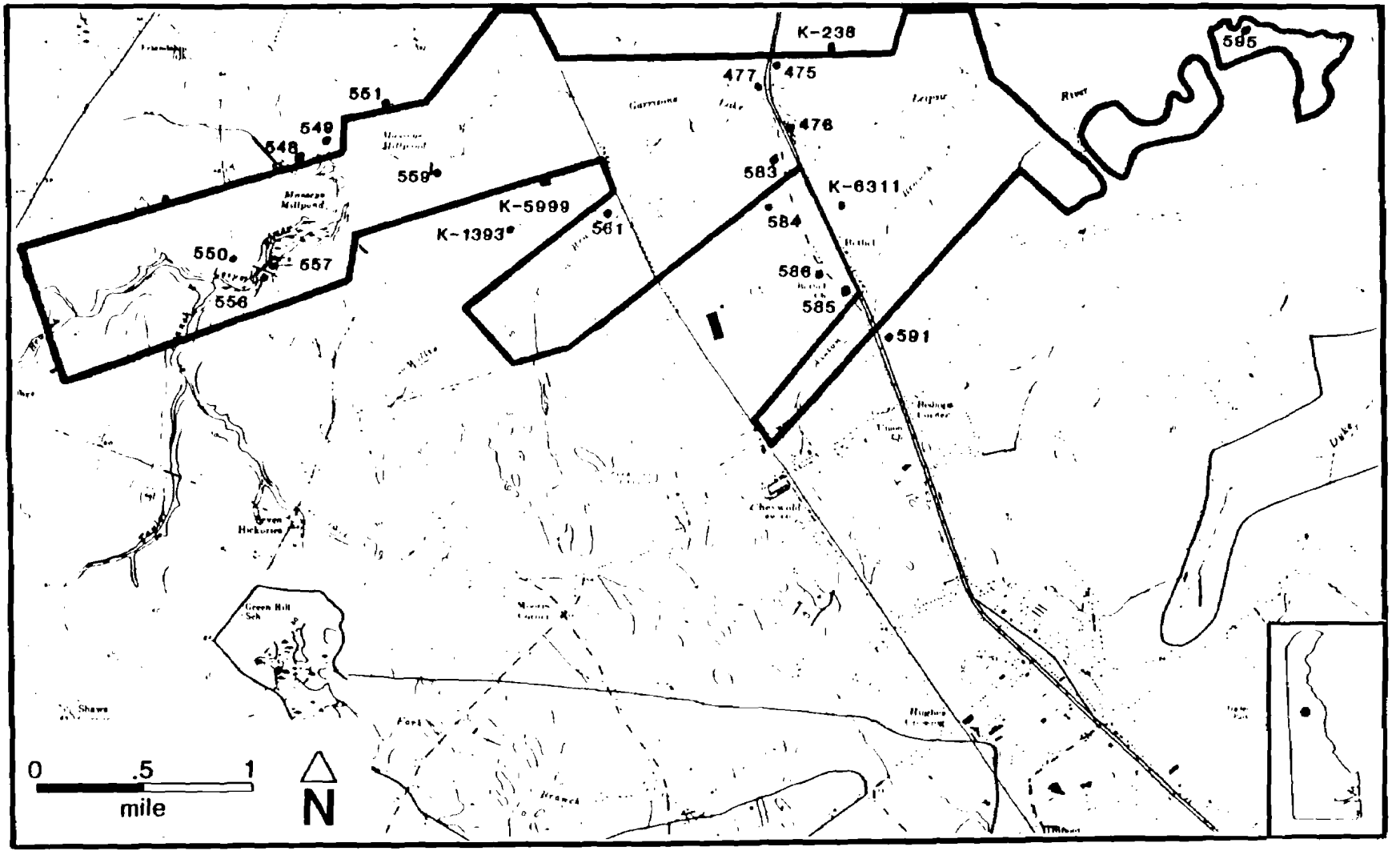


TABLE 22

TYPE AND NUMBER OF STUDY AREA HISTORIC SITES - SUMMARY DESCRIPTION

SITE NUMBER	NUMBER	USGS QUAD	DATE	FUNCTIONS	DISTURB.	ARCHAEO. POTENT.	HISTORIC SIGNIF.	NUMBUILDINGS	ARCHAEO. FEATURES	TOTAL RESOURCE POTENTIAL
[illegible]	LITTLE CREEK	DOVER	E19 C	LFM	DLT	N	N	0	CM1	N
[illegible]	LITTLE CREEK	DOVER	P1850	SLH	RDS,MD	N	N	0	0	N
[illegible]	LITTLE CREEK	DOVER	P1863	DMS	RDS,I	N	N	0	0	N
[illegible]	LITTLE CREEK	DOVER	P1868	DMS	RDS,MD	N	N	0	0	N
[illegible]	LITTLE CREEK	DOVER	P1863	DMS	RDS,TF	N	N	0	0	N
[illegible]	LITTLE CREEK	DOVER	P1863	DMS	RDS	N	N	0	0	N
[illegible]	LITTLE CREEK	DOVER	P1863	DMS	RDS,MD	N	N	0	0	N
[illegible]	LITTLE CREEK	DOVER	P1863	DMS	RDS,TF	N	N	0	0	N
[illegible]	LITTLE CREEK	DOVER	P1863	DMS	UN	N	N	H1,A2,I1,H2	0	N
[illegible]	LITTLE CREEK	DOVER	P1863	DMS	RDS,TF	N	N	0	0	N
[illegible]	LITTLE CREEK	DOVER	P1863	DMS	RDS	N	N	I1,L3,C2,H1,H1	FN2,W1,OD1	N
[illegible]	LITTLE CREEK	DOVER	P1863	DMS	UN	N	N	H1,H1,L1	W2	N
[illegible]	LITTLE CREEK	DOVER	1850 AA	SUBD S	RDS,MD	I	N	0	0	N
[illegible]	LITTLE CREEK	DOVER	P1850	FARM	RDS,TF	N	N	0	0	N
[illegible]	LITTLE CREEK	DOVER	M18 I	FARM	UN	N	N	L2,A2	0	N
[illegible]	LITTLE CREEK	DOVER	M18 I	CEMS,LFM	UN	N	N	J1,I1	W1	N
[illegible]	LITTLE CREEK	DOVER	1850 AA	DMS	RDS,I	N	N	0	0	N
[illegible]	LITTLE CREEK	DOVER	P1863	DMS	UN	N	N	J1,I1,H1,L1,C1	W1	N
[illegible]	LITTLE CREEK	DOVER	P1863	INSTN	UN,DMS	N	N	L2	W1	N
[illegible]	LITTLE CREEK	DOVER	P1863	DMS	RDS	N	N	H1,L3,J1	FN1,OD1	N
[illegible]	LITTLE CREEK	DOVER	P1863	DMS	UN	N	N	I2,L4,J2,B4	0	N
[illegible]	LITTLE CREEK	DOVER	E 1863	INSTN	RDS,MD	I	N	0	0	N
[illegible]	LITTLE CREEK	DOVER	E19 C	LFM	DLT	N	N	0	CM1	N

FIGURE 43

Standing Structures from BAHP Files – Dyke and Muddy Branches Study Area 10

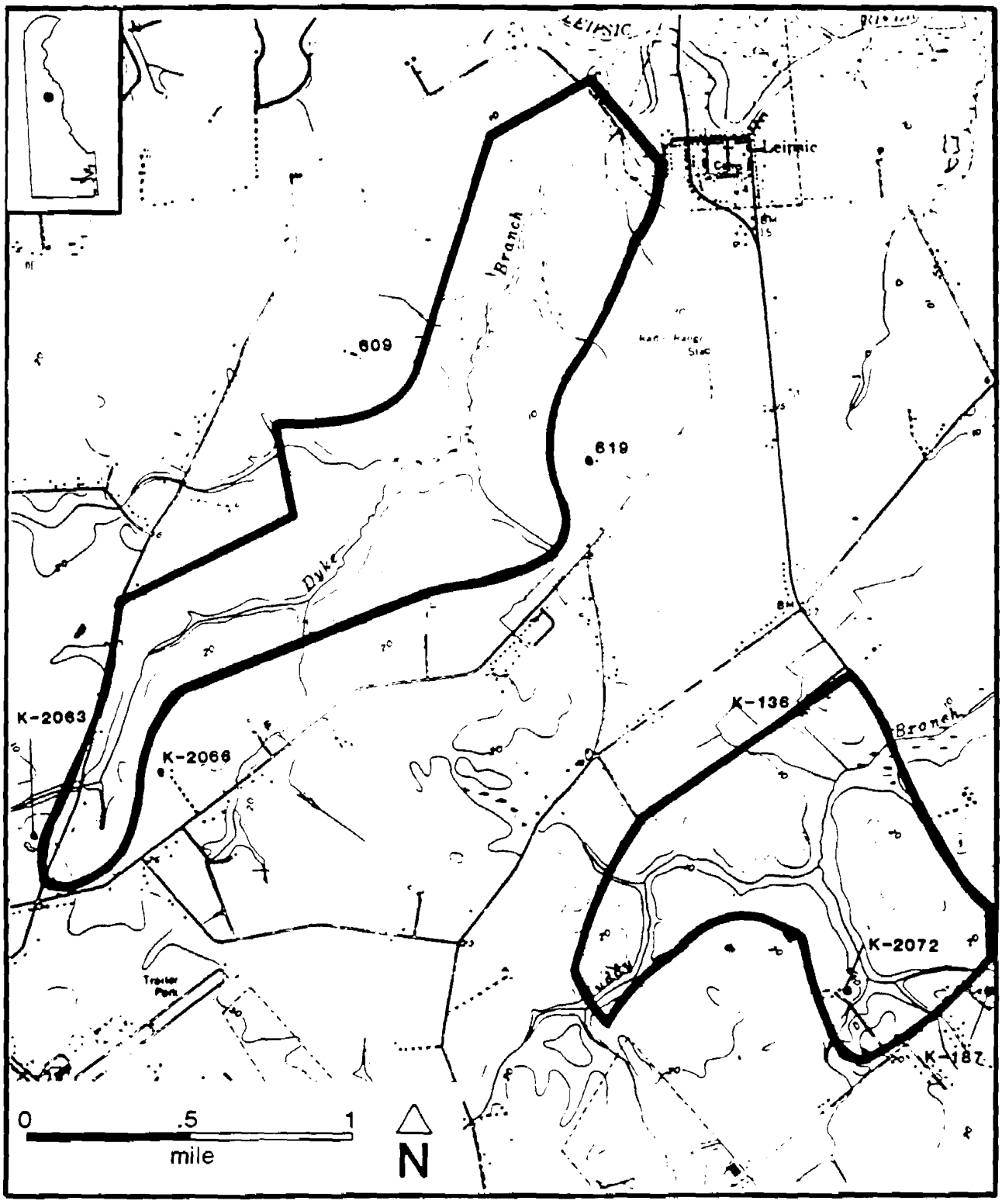
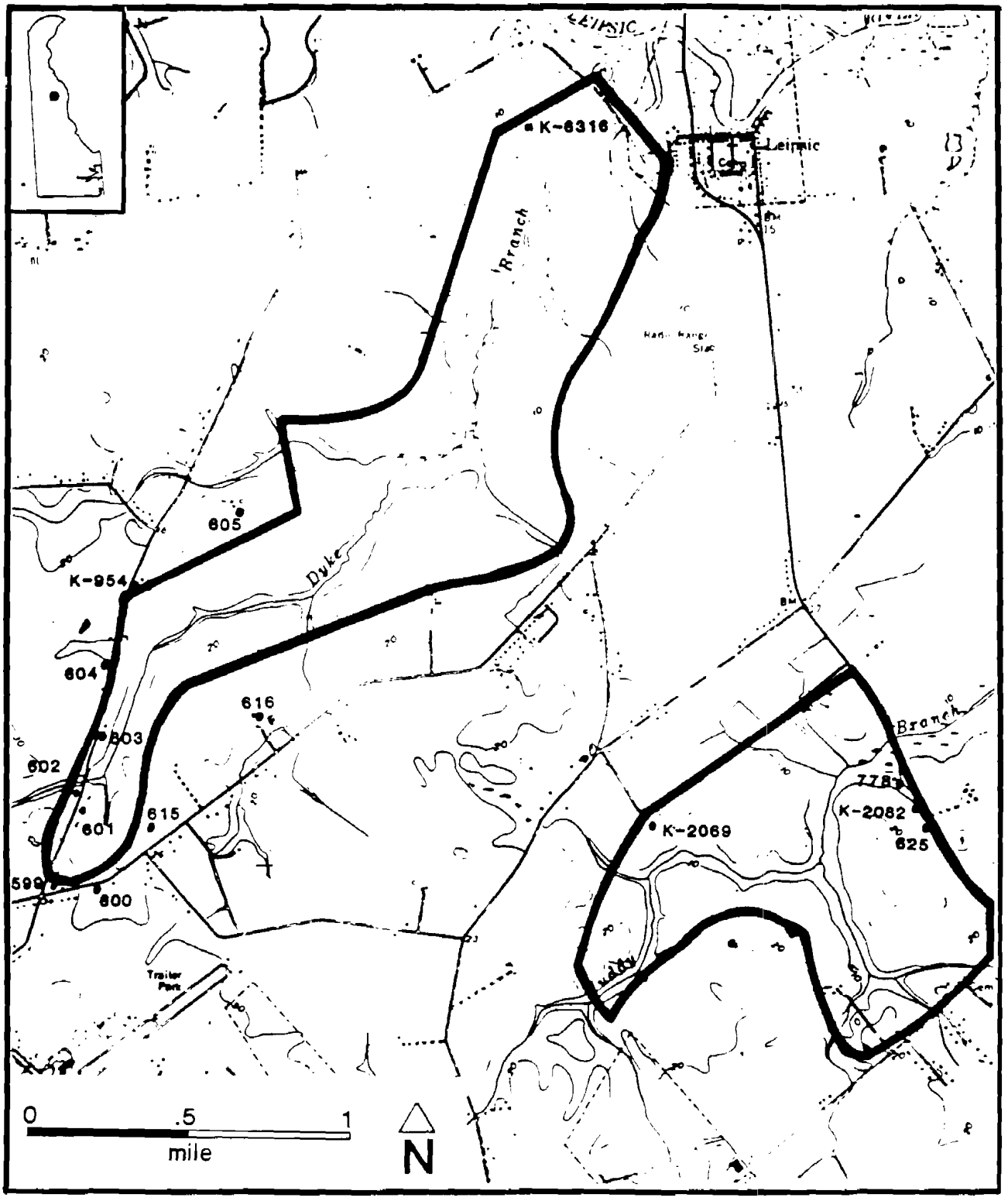


FIGURE 44

Historic Archaeological Resources Data – Dyke and Muddy Branches Study Area 10



the seven standing structures in the area (K-954, K-2069, K-2082) have been removed since inclusion in the BAHP files.

Only one group of historic site types in the Dyke and Muddy Branches area was given high overall cultural resource potential. Although most of the historical archaeological sites in this area are poorly preserved, three pre-1868 agricultural complex sites (609, 616, 619) have a high potential for intact subsurface features.

Further evidence of large-scale agriculture can be seen in the only mid eighteenth century plantation in the Corridor, K-136. This brick structure is in excellent condition and has a high potential for undisturbed archaeological features.

Two sites not included in the initial survey were also surveyed. The first site, K-6316, is a late eighteenth to early nineteenth century family cemetery and contains members of the Naudain family. A residence of the same name and a "Naudain Landing" are identified near the cemetery by Beers. The second historic site added is "Pleasonton Abbey" (K-187), a ca. 1742 church and cemetery. Both of these historic sites represent a significant aspect of state and local history.

Hughes Crossing Study Area

Table 23 provides a summary description of the historic archaeological and standing structure sites in the Hughes Crossing area. Figure 45 shows the location of the standing structures in the area and Figure 46 shows the location of the historical archaeological sites. This study area includes portions of Kenton, Little Creek, and East Dover Hundreds (Figure 3). Preservation is excellent--only one standing structure (K-1045) has been removed since inclusion in the BAHP files. Historical archaeological sites are also relatively intact. Approximately one-half of the archaeological locations showed no evidence of severe mechanical disturbance.

The Hughes Crossing area contains a significant range of early nineteenth to twentieth century site types. Included in this area are two mills, a church, and two schools. The church, Central Church (K-1037) and one of the schools, Green Hill Mennonite School, is still active.

The Hughes Crossing area is one of the largest and most complex of the study areas. This area contains a wide range of site types not well represented along the corridor. The Hughes Crossing area offers the opportunity to study on a significant scale community development in rural nineteenth and twentieth century Delaware. Particularly important would be the opportunity to investigate the development of "crossroad" communities (i.e. Moore's Corner) and the growth and decline of these communities as local economic/transportation centers.

TABLE 25

HUGHES CROSSING STUDY AREA HISTORIC SITES - SUMMARY DESCRIPTION

SITE NUMBER	HUNDRED	USGS QUAD	DATE	FUNCTIONS	DISTURB.	ARCHAEO. POTENT.	HISTORIC SIGNIF.	OUTBUILDINGS	ARCHAEO. FEATURES	TOTAL RESOURCE POTENT.
[illegible]	KENTON	DOVER	P1868	AGR X	RUS	M	M	M1,C1,N2	0	M
[illegible]	KENTON	DOVER	P1868	AGTEN	RUS,TP	L	M	0	0	M
[illegible]	KENTON	DOVER	P1868	AGR X	RUS,TP	L	M	0	0	M
[illegible]	KENTON	DOVER	P1868	SCH	RUS	M	M	0	0	M
[illegible]	KENTON	DOVER	P1868	AGTEN	UN,SB	M	M	L2,N1	W1	M
[illegible]	KENTON	DOVER	P1868	AGTEN	RUS,MD	L	M	0	W1	M
[illegible]	KENTON	DOVER	P1868	AGR X	RUS	M	M	L2	0	M
[illegible]	EAST DOVER	DOVER	P1868	AGR X	UN,L	M	M	J1,L2	0	M
[illegible]	EAST DOVER	DOVER	P1868	AGTEN	RUS,FP,I	M	M	0	0	M
[illegible]	EAST DOVER	DOVER	P1868	AGTEN	RUS,TP	M	M	0	0	M
[illegible]	EAST DOVER	DOVER	P1868	AGR X	RUS	M	M	A1,C1,L2	0	M
[illegible]	EAST DOVER	DOVER	P1868	AGR X	RUS,MD,I	L	M	0	0	M
[illegible]	EAST DOVER	DOVER	P1868	AGR X	RUS,L	M	M	J1,L1	0	M
[illegible]	EAST DOVER	DOVER	P1868	AGR X	RUS,TP	M	M	0	0	M
[illegible]	EAST DOVER	DOVER	P1868	AGTEN	RUS,TP	M	M	0	0	M
[illegible]	EAST DOVER	DOVER	P1868	AGTEN	RUS,L	L	M	0	0	M
[illegible]	EAST DOVER	DOVER	P1868	AGR X	RUS,MD	M	M	C1,L1	0	M
[illegible]	EAST DOVER	DOVER	P1868	AGTEN	RUS,MD	L	M	0	0	M
[illegible]	EAST DOVER	DOVER	P1868	AGR X	UN	M	M	M1,C1,A1,L4,O1	W1	M
[illegible]	EAST DOVER	DOVER	P1850	AGR X	RUS,MD	L	M	0	0	M
[illegible]	EAST DOVER	DOVER	P1868	INDTEN	RUS	M	M	I1,L2,R1	W1,CH1,FN2	M
[illegible]	EAST DOVER	DOVER	P1868	INDTEN	DEF	M	M	0	0	M
[illegible]	EAST DOVER	DOVER	C1870	AGR X	UN	M	M	PR1,J1	FN1	M
[illegible]	EAST DOVER	DOVER	1900	AGR X	UN	M	M	J1,C1	0	M
[illegible]	EAST DOVER	DOVER	C1860	CEME	UN	M	M	0	W1	M
[illegible]	EAST DOVER	DOVER		AGR X	RUS,MD	M	M	J1,N1	0	M
[illegible]	EAST DOVER	DOVER	P1868	AGR X	RUS	M	M	M1,R1,I1,L3	CH1,FN1	M
[illegible]	EAST DOVER	DOVER	C1900	AGR X	UN	M	M	A1,N1,C1	W1	M
[illegible]	EAST DOVER	DOVER	C1853	SCH AGR X	UN	M	M	A2,J1,D1,L2,I1	0	M
[illegible]	EAST DOVER	DOVER		AGR X	UN	M	M	J1,L3	W1	M
[illegible]	EAST DOVER	DOVER	P1868	AGR X	UN,SB	M	M	M1,C3,A8,K2,O1,R1	W2,OD1	M
[illegible]	KENTON	DOVER		AGR X	UN,DEF	M	M	L2	0	M
[illegible]	KENTON	KENTON	C1920-30	SCH	UN	M	M	PR1,L1	0	M
[illegible]	KENTON	DOVER	C1920-40	AGR X	UN	M	L	0	0	M
[illegible]	KENTON	DOVER	P1868	AGR X	UN,DEF	M	M	L3,J1,C1	0	M
[illegible]	KENTON	DOVER	C1900	AGR X	UN,DEF	M	M	L4,PR1	0	M
[illegible]	KENTON	DOVER	P1868	AGR X	UN	M	M	J1,L1	0	M
[illegible]	EAST DOVER	DOVER	19 C	DAM	MD,F	M	M	0	D1	M
[illegible]	EAST DOVER	DOVER	L19 C	AGR X	UN	M	M	C1,J1,A1,N1	W1	M
[illegible]	EAST DOVER	DOVER	L19 C	AGR X	UN,MD	M	M	O1,M1,F1	W2,FN2	M
[illegible]	EAST DOVER	DOVER	L19 C	AGR X	UN	M	M	J1,A1,L4,D1	UN1	M
[illegible]	KENTON	KENTON	19TH C	STEEL	RUS,TP	M	M	0	0	M

FIGURE 45

Standing Structures from BAHP Files – Hughes Crossing Study Area 6

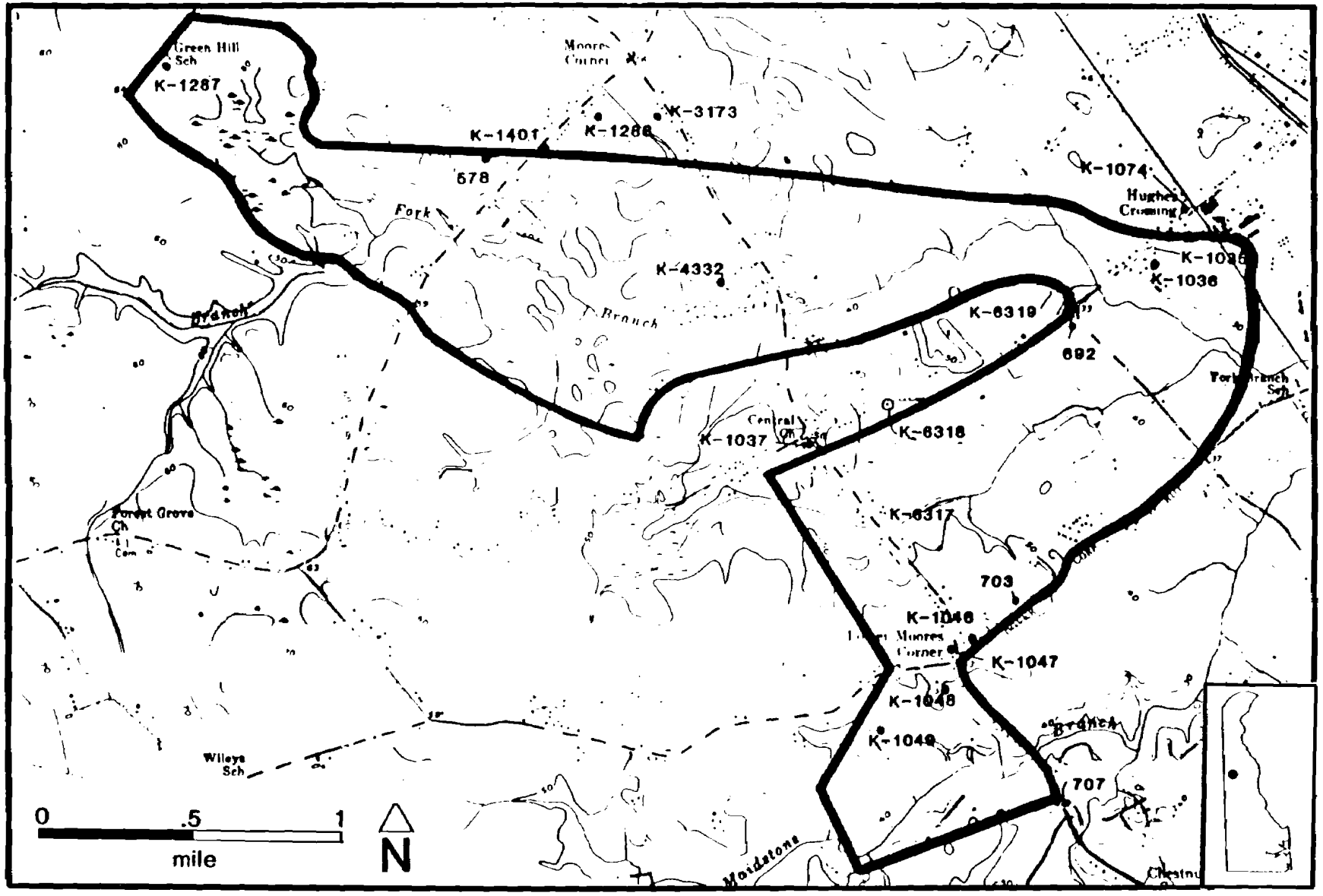
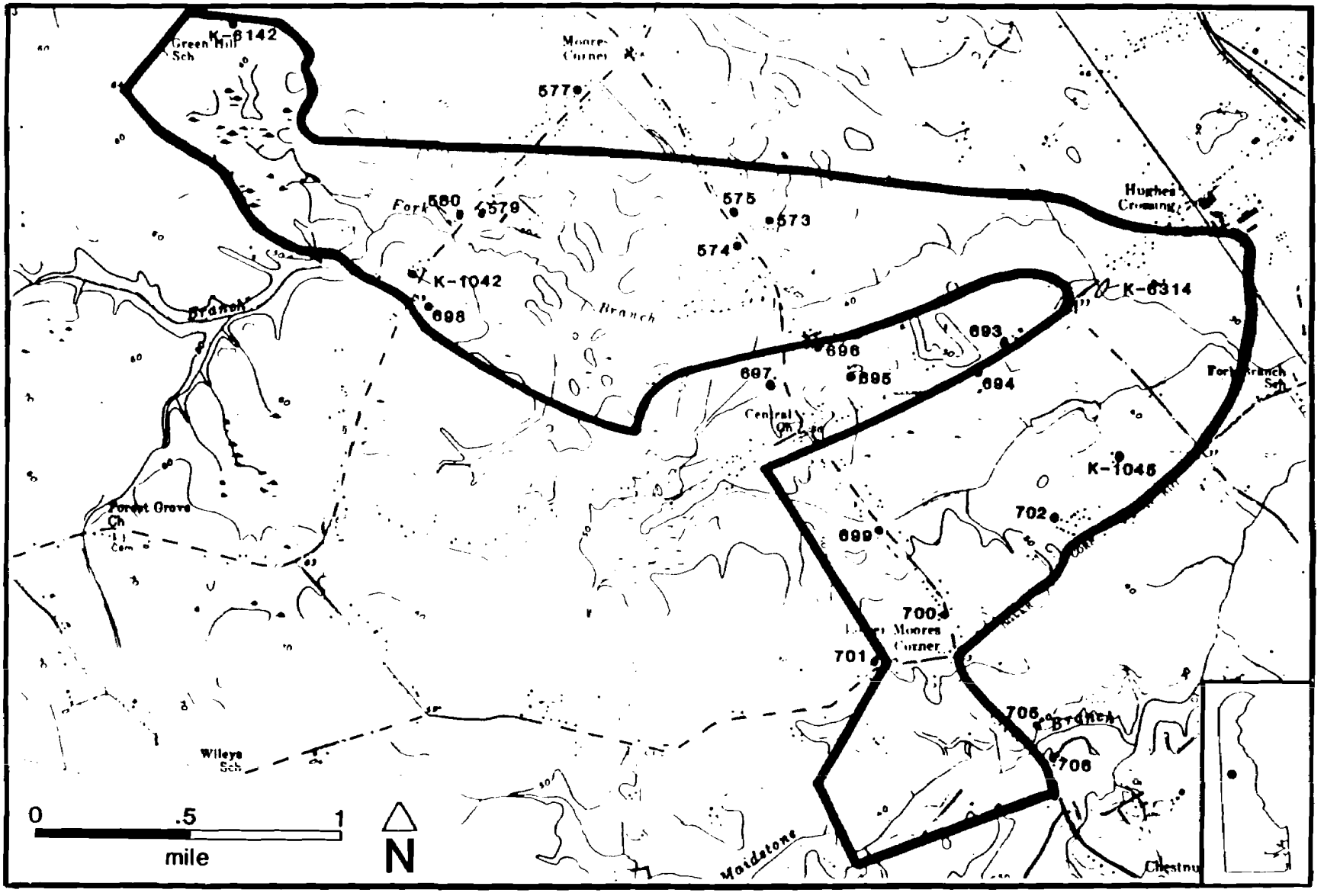


FIGURE 46

Historic Archaeological Resources Data – Hughes Crossing Study Area 6



The primarily agricultural focus of northern Kent County is well represented in the Hughes Crossing area. Two previously unrecorded mid-nineteenth century agricultural complex sites (K-6317, K-6319) are particularly well preserved and offer the potential for the recovery of significant historical and material cultural information. Both sites have been associated with visible archaeological features. Later agricultural complexes are also represented in the area. Four standing structures in particular (K-1035, K-1048, K-1049, K-4332) are both structurally intact and associated with visible archaeological features.

One group of sites given a high overall cultural resource potential are three industrial tenant residences (706, 707, K-1042). Two of these locations are archeological sites, with one (706) associated with visible features. Industrial tenant residences in this area represent an important, but poorly documented shift in the focus of primarily agricultural communities towards other economic opportunities in the nineteenth century. These locations present an opportunity to examine the archaeological evidence of industrial tenancy and would provide a foundation for future work in Delaware and surrounding states. The potential for the recovery of valuable data from these three locations is enhanced by the range and overall integrity of the majority of the sites in the study area.

Chestnut Grove Study Area

Table 24 gives a summary description of the historic sites surveyed in the Chestnut Grove area. Figure 47 shows the location of the standing structures in the area and Figure 48 shows the location of the historical archaeological sites. The Chestnut Grove Study Area is located in East Dover Hundred (Figure 3). Preservation is fair to good with only one standing structure (K-1052) removed since inclusion in the BAHP files. All of the archaeological sites, however, have been mechanically disturbed.

Only one group of site types in this area was given a high overall cultural resource potential. Five mid-nineteenth to early twentieth century agricultural complexes along the Calhoun Branch have been identified as significant. Two of the locations (713, K-1054) have associated visible archaeological features in undisturbed contexts. The other three sites (K-1024, K-1065, K-1081) are undisturbed, but have no visible archaeological features.

One additional location given a high cultural resource potential deserves special mention. Standing structure #709 is a well-preserved, pre-1868 school. As such, this site is representative of Delaware's public education system in the mid-nineteenth to early twentieth centuries. The area around the school is undisturbed and offers the opportunity for the recovery of significant material cultural information. Schools represent an important aspect of community life and are assoicated with

TABLE 24

CHESTNUT GROVE STUDY AREA HISTORIC SITES - SUMMARY DESCRIPTION

SITE NUMBER	HUNDRED	USGS QUAD	DATE	FUNCTIONS	DISTURB.	ARCHAEO. POTENT.	HISTORIC SIGNIF.	OUTBUILDINGS	ARCHAEO. FEATURES	TOTAL RESOURCE POTENT.
208	EAST DOVER	DOVER	P1868	INDIEN	ROS,MD	M	M	0	0	M
209	EAST DOVER	DOVER	P1868	SCH	UN	M	M	L1,PR1	0	M
210	EAST DOVER	DOVER	P1868	HOUSE	ROS,MD	M	M	BS,N1,C1,L1	0	M
211	EAST DOVER	DOVER	P1868	HOUSE	ROS,TF	M	M	0	0	M
212	EAST DOVER	DOVER	P1868	HOUSE	ROS,MD	M	M	0	0	M
213	EAST DOVER	DOVER	P1868	HOUSE	UN,MD	M	M	N1	W1	M
214	EAST DOVER	DOVER	P1868	HOUSE	ROS,MD,L	L	M	0	0	M
215	EAST DOVER	DOVER	P1868	HOUSE	ROS,TF	M	M	0	0	M
216	EAST DOVER	DOVER	P1868	STORE	ROS,TF	M	M	0	0	M
217	EAST DOVER	DOVER	P1868	HOUSE	ROS,TF	M	M	0	0	M
224	EAST DOVER	DOVER	P1868	HOUSE	ROS,MD	M	M	N1	0	M
K1024	EAST DOVER	DOVER		HOUSE	UN,SM	L	M	J1,A1,N1	0	M
K1052	EAST DOVER	DOVER	1886	HOUSE	ROS	M	M	L3,PR1,N1	0	M
K1054	EAST DOVER	DOVER	1890 ca	HOUSE	UN	M	M	J1,F1,I2	OD1	M
K1065	EAST DOVER	DOVER	1885	HOUSE	UN	M	M	N1,W1,M1	0	M
K1067	EAST DOVER	DOVER		STORE	ROS,MD	M	U	U	U	U
K1072	EAST DOVER	DOVER	L19-1	DWLG	UN	U	M	L2,T1,D1	OD1	M
K1091	EAST DOVER	DOVER	C1850	HOUSE	UN,F	M	M	M1,J1,N1	0	M

FIGURE 47

Standing Structures from BAHP Files – Chestnut Grove Study Area 8

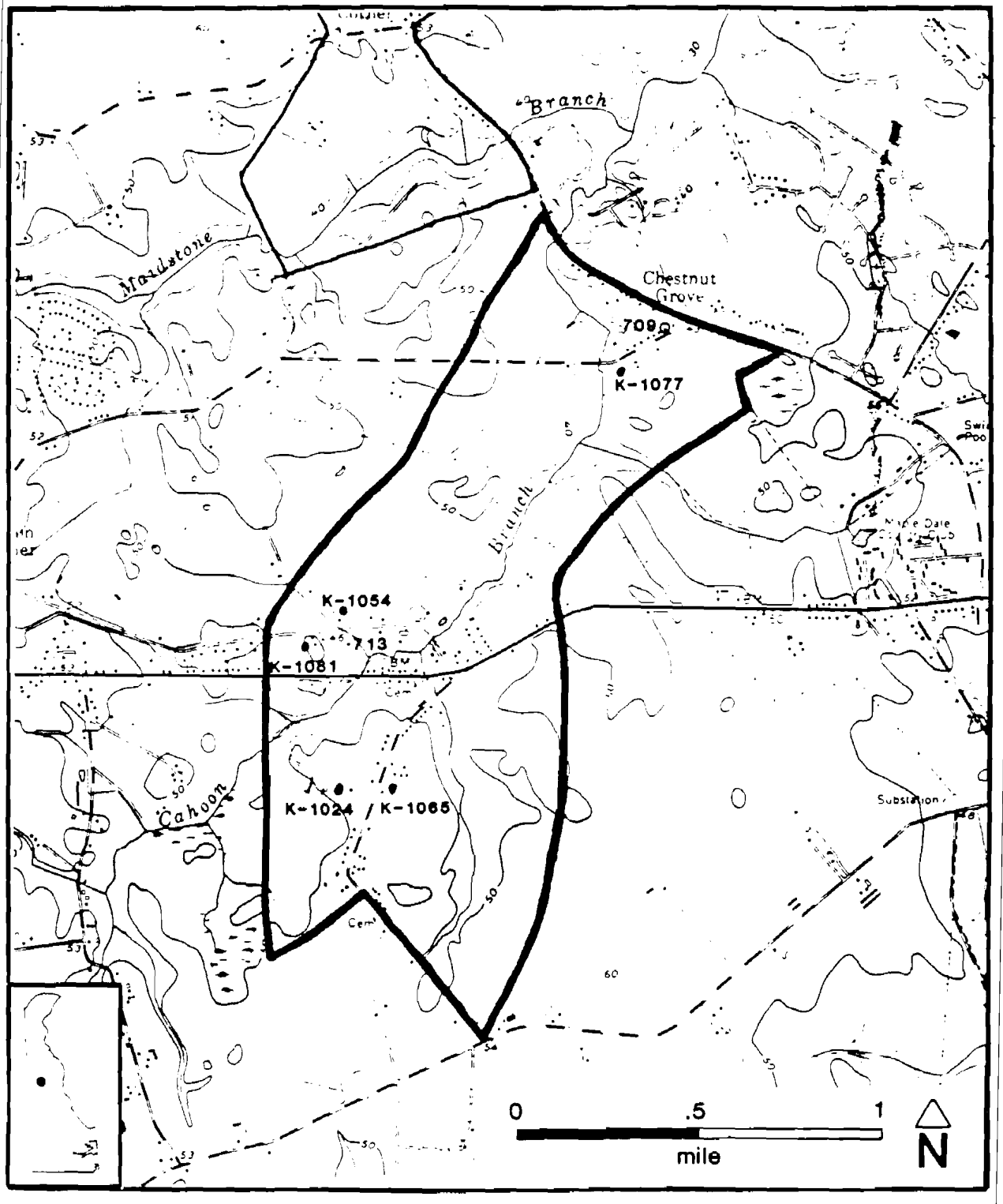
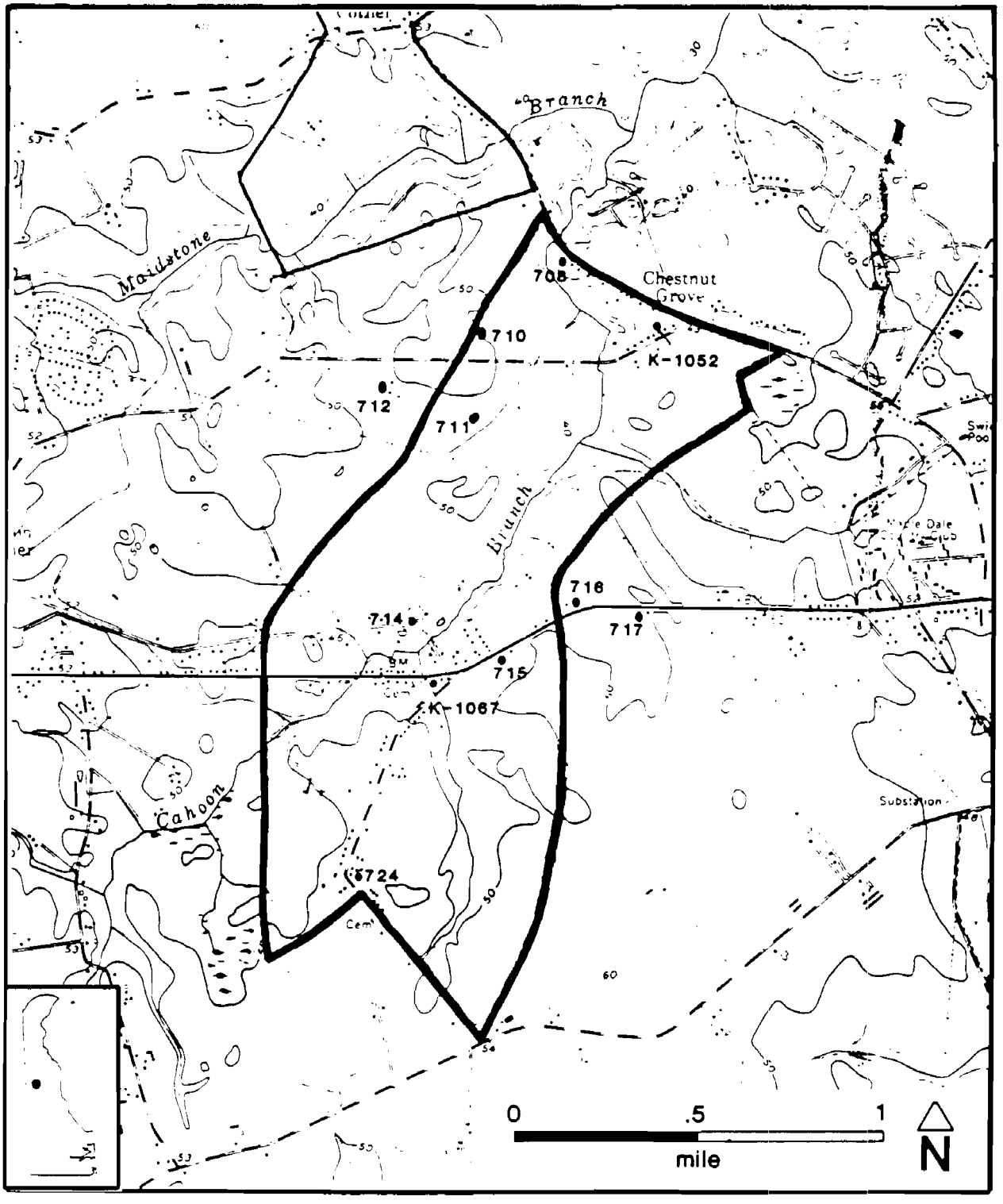


FIGURE 48

Historic Archaeological Resources Data - Chestnut Grove Study Area 8



events that have made a significant contribution to the broad patterns of state and local history.

Little River/Pipe Elm Branch Study Area

Table 25 provides a summary description of the historic archaeological and standing structure locations in the Little River/Pipe Elm Branch area. Figure 49 shows the location of the standing structures in the area and Figure 50 shows the location of the historical archaeological sites. The Little River/Pipe Elm Branch Study Area is within East Dover Hundred (Figure 3).

The primarily agricultural focus of northern Kent County is well represented in this area. The majority (28) of the 31 standing structures and historic archaeological sites in this area can be directly associated with intensive agricultural production. Preservation, however is only fair to poor--most of the historic sites in this area have been disturbed by recent plowing and/or house construction.

Two groups of sites were given a high overall cultural resource potential. The first, and best preserved, are six farm complex locations, including one previously unrecorded site (K-6313). Only two of these sites (656, 684), however, can be associated with visible archaeological features.

The second group of high cultural resource potential are four agricultural tenant house locations. Only one site (647) is intact and none can be assoicated with visible archaeological features. Location 647, however, is an excellent example of pre-1868 agricultural tenant residence sites and offers significant archaeological potential for information on the material culture of agricultural tenancy, still an important part of Delaware agriculture. Few tenant houses have been excavated in Kent County and each of these four sites would provide an important contribution to the available data base.

Wyoming Lake Study Area

Table 26 provides a summary of historical archaeological and standing structure sites in the Wyoming area. Figure 51 shows the location of the standing structures in the area and Figure 52 shows the location of the historical archaeological sites. The Wyoming Lake Study Area includes portions of East Dover, North Murderkill, and West Dover Hundreds (Figure 3). Preservation is good to excellent; all of the standing structures identified in by the BAHP are intact.

Three groups of site types were given a high overall cultural resource potential. Each of the types relates directly to the development of large-scale agricultural production in Delaware.

The first group includes five agricultural complex sites. Although none of these locations have associated archaeological

TABLE 25

LITTLE RIVER/PIPE ELM BRANCH STUDY AREA HISTORIC SITES - SUMMARY DESCRIPTION

SITE NUMBER	HUNDRED	USGS QUAD	DATE	FUNCTIONS	DESIGNS.	ARCHAEO. POTENT.	HISTORIC SIGNIF.	OUTBUILDINGS	ARCHAEO. FEATURES	TOTAL RESOURCE POTENT.
[illegible]	LITTLE CREEK	LITTLE CREEK	[illegible]	AG/TEN	E05,MD	H	H	H	0	H
[illegible]	LITTLE CREEK	LITTLE CREEK	[illegible]	AG/TEN	UN	H	H	J1,N1,A2,L1	0	H
[illegible]	LITTLE CREEK	LITTLE CREEK	[illegible]	AG/TEN	E05,TF	M	H	0	0	M
[illegible]	LITTLE CREEK	LITTLE CREEK	[illegible]	AG/TEN	E05,TF	M	H	0	0	M
[illegible]	LITTLE CREEK	LITTLE CREEK	[illegible]	AG/TEN	E05,TF	M	H	0	0	M
[illegible]	LITTLE CREEK	LITTLE CREEK	[illegible]	AG/SS	UN,I	H	H	B?,L2,M6	M1	H
[illegible]	LITTLE CREEK	LITTLE CREEK	[illegible]	AG/TEN	E05,TF	M	H	0	0	M
[illegible]	LITTLE CREEK	LITTLE CREEK	[illegible]	AG/TEN	E05,TF	M	H	0	0	M
[illegible]	LITTLE CREEK	LITTLE CREEK	[illegible]	AG/TEN	E05,TF	M	H	0	0	M
[illegible]	LITTLE CREEK	LITTLE CREEK	[illegible]	AG/TEN	E05,TF	M	H	0	0	M
[illegible]	EAST DOVER	LITTLE CREEK	[illegible]	DW/SS	UN,MD	H	H	J1,N3,M1	0	H
[illegible]	EAST DOVER	LITTLE CREEK	[illegible]	AG/TEN	E05,TF	M	H	0	0	M
[illegible]	EAST DOVER	LITTLE CREEK	[illegible]	DW/SS	E05,MD	M	H	0	0	M
[illegible]	EAST DOVER	LITTLE CREEK	[illegible]	DW/SS	MD	L	M	L1	0	M
[illegible]	EAST DOVER	LITTLE CREEK	[illegible]	DW/SS	UN	H	H	N1,A1	0	H
[illegible]	EAST DOVER	LITTLE CREEK	[illegible]	DW/SS	E05,TF	M	M	0	0	M
[illegible]	EAST DOVER	LITTLE CREEK	[illegible]	DW/SS	E05,MD	L	H	0	0	M
[illegible]	EAST DOVER	LITTLE CREEK	[illegible]	DW/SS	UN	H	H	M?,N2,A1	0	H
[illegible]	EAST DOVER	LITTLE CREEK	[illegible]	DW/SS	E05,MD	L	M	0	0	M
[illegible]	EAST DOVER	LITTLE CREEK	[illegible]	DW/SS	E05,MD	M	M	A1	0	M
[illegible]	EAST DOVER	LITTLE CREEK	[illegible]	DW/SS	E05,MD,I	L	M	I1,N1,H2,R1,A1,M1	0	M
[illegible]	EAST DOVER	LITTLE CREEK	[illegible]	AG/TEN	E05,TF	M	H	0	0	M
[illegible]	EAST DOVER	LITTLE CREEK	[illegible]	AG/TEN	E05,TF	M	H	0	0	M
[illegible]	EAST DOVER	LITTLE CREEK	[illegible]	AG/TEN	E05,TF	M	H	0	0	M
[illegible]	EAST DOVER	LITTLE CREEK	[illegible]	AG/TEN	E05,MD	L	M	0	0	L
[illegible]	EAST DOVER	LITTLE CREEK	[illegible]	AG/TEN	E05,MD	L	H	0	0	L
[illegible]	EAST DOVER	LITTLE CREEK	[illegible]	AG/TEN	E05,MD	L	H	0	0	L
[illegible]	EAST DOVER	LITTLE CREEK	[illegible]	DW/SS	E05,TF	M	H	0	0	M
[illegible]	EAST DOVER	LITTLE CREEK	[illegible]	DW/SS	E05,TF	M	H	H	001	H
[illegible]	EAST DOVER	LITTLE CREEK	[illegible]	DW/SS	E05,TF,MD	L	I	M1,C1,A2,N1	0	M
[illegible]	EAST DOVER	LITTLE CREEK	[illegible]	DW/SS	UN	H	H	M?,M1,W3,C4,I3,A4,R2	0	H
[illegible]	EAST DOVER	LITTLE CREEK	[illegible]		E05,TF	H	H	0	0	H

FIGURE 49

Standing Structures from BAHP Files –
Little River/Pipe Elm Branch Study Area 5

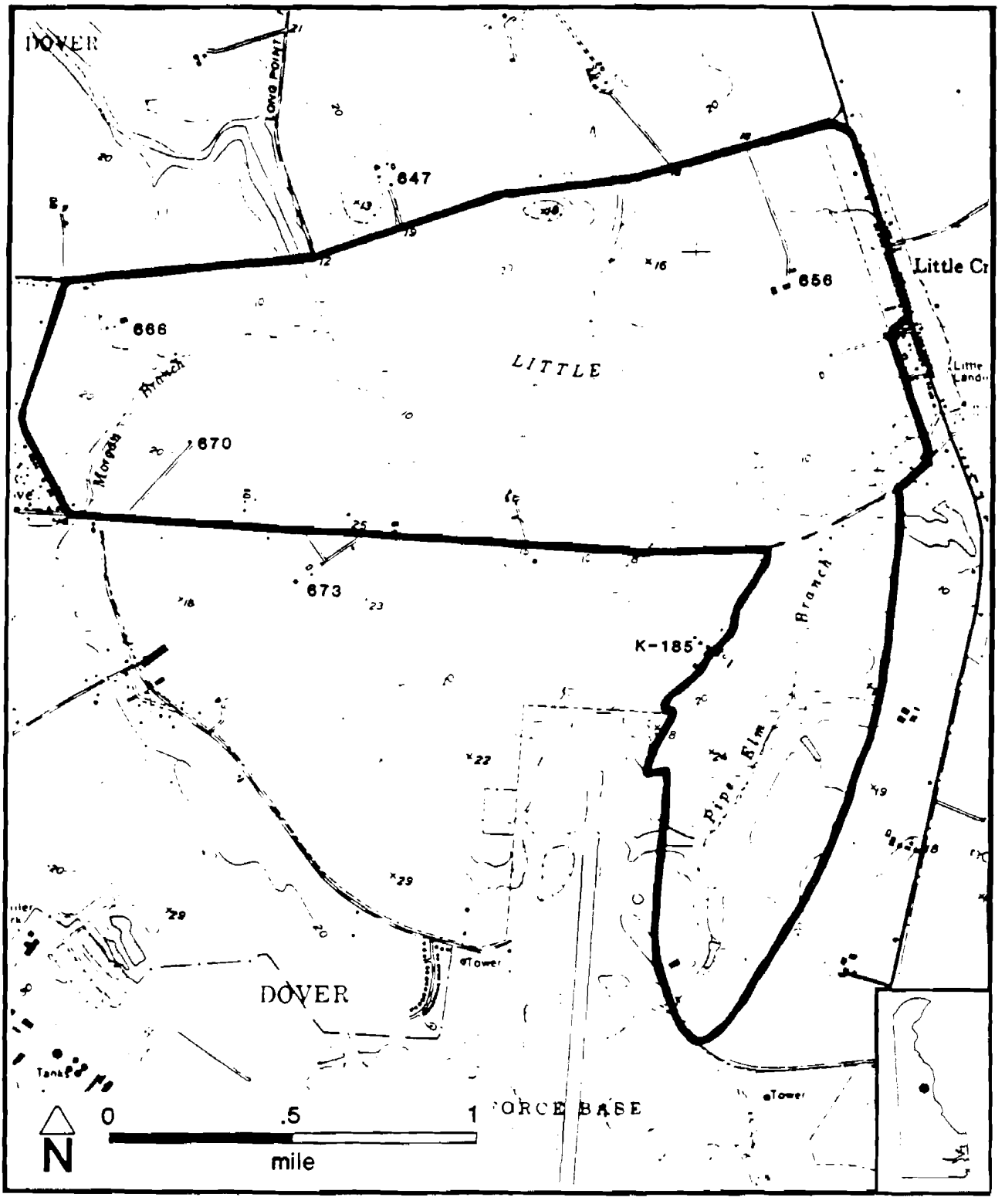


FIGURE 50

Historic Archaeological Resources Data - Little River/Pipe Elm Branch Study Area 5

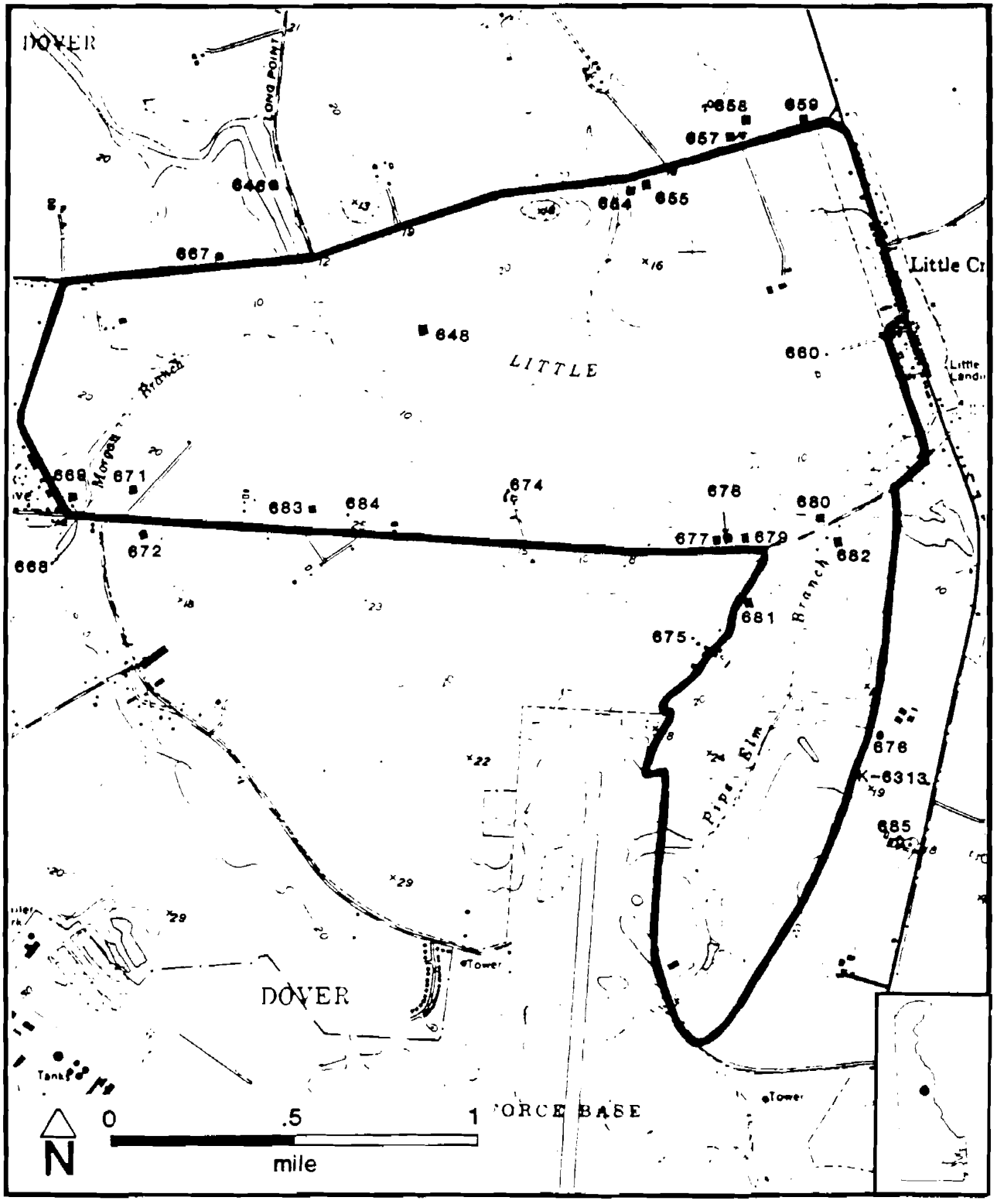


TABLE 24

WYOMING LAKE STUDY AREA HISTORIC SITES - SUMMARY DESCRIPTION

SITE NUMBER	HUNDFLD	USGS QUAD	DATE	FUNCTIONS	FEATURES	ARCHAEO. POTENT.	HISTORIC SIGNIF.	OUTBUILDINGS	ARCHAEO. FEATURES	TOTAL RESOURCE POTENT.
[illegible]	EAST DOVER	DOVER	[illegible]	DOMEN	FDS,TF	M	M	0	0	M
[illegible]	EAST DOVER	DOVER	[illegible]	DOMES	UN	M	M	O2,A3,L3,N1,L1,U1	0	M
[illegible]	NORTH MURDERKILL	WYOMING	[illegible]	DOMES	FDS	M	M	U	U	M
[illegible]	NORTH MURDERKILL	WYOMING	[illegible]	DOMES	FDS	M	M	U	U	M
[illegible]	NORTH MURDERKILL	WYOMING	[illegible]	SIGNIF	FDS,TF	M	M	0	0	M
[illegible]	NORTH MURDERKILL	WYOMING	[illegible]	DOMES	FDS,TF	M	M	0	0	M
[illegible]	NORTH MURDERKILL	WYOMANG	[illegible]	DOMES	FDS,TF	M	M	0	0	M
[illegible]	WEST DOVER	DOVER	[illegible]	DOMES	UN	M	M	L1	0	M
[illegible]	WEST DOVER	DOVER	[illegible]	DOMES	FDS	M	M	I1,L4,H1	0	M
[illegible]	NORTH MURDERKILL	WYOMING	[illegible]	DOMES	UN	M	M	L4,J2,A2,C1,M1	W1	M
[illegible]	NORTH MURDERKILL	WYOMING	[illegible]	AGRI	UN,DET	M	M	L2,N1,H1	0	M
[illegible]	NORTH MURDERKILL	WYOMING	[illegible]	DOMES	UN,SH	M	M	J1	0	M
[illegible]	NORTH MURDERKILL	WYOMING	[illegible]	DOMEN	UN	M	M	L4	0	M
[illegible]	NORTH MURDERKILL	WYOMING	[illegible]	DOMEN	UN	M	M	N1	0	M
[illegible]	NORTH MURDERKILL	WYOMING	[illegible]	DOMES [illegible]	UN,SH	M	M	0	0	M
[illegible]	EAST DOVER	DOVER	[illegible]	MILI	UN,SA,MD	U	M	N2	0	M

FIGURE 51

Standing Structures from BAHP Files – Wyoming Lake Study Area 9

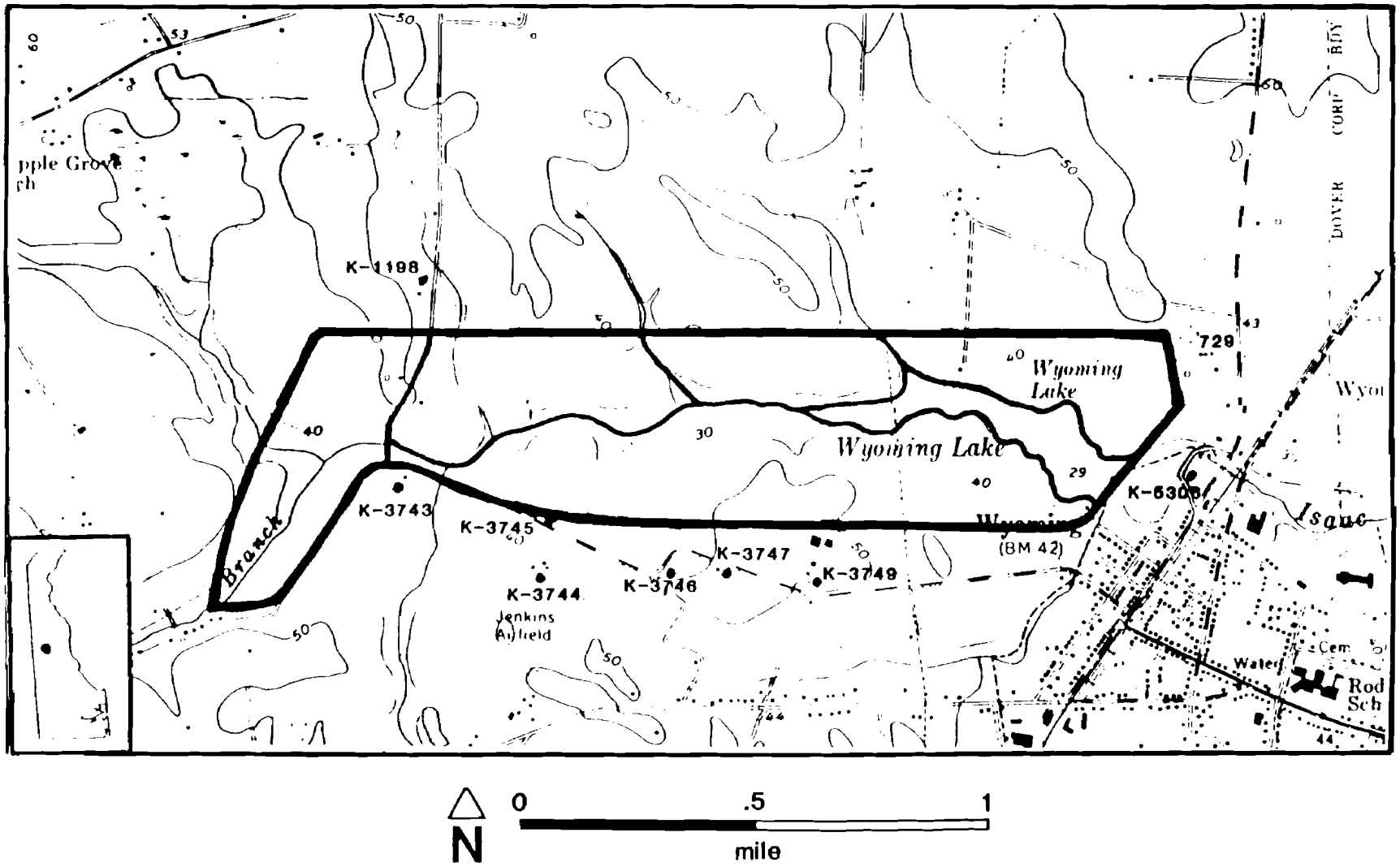
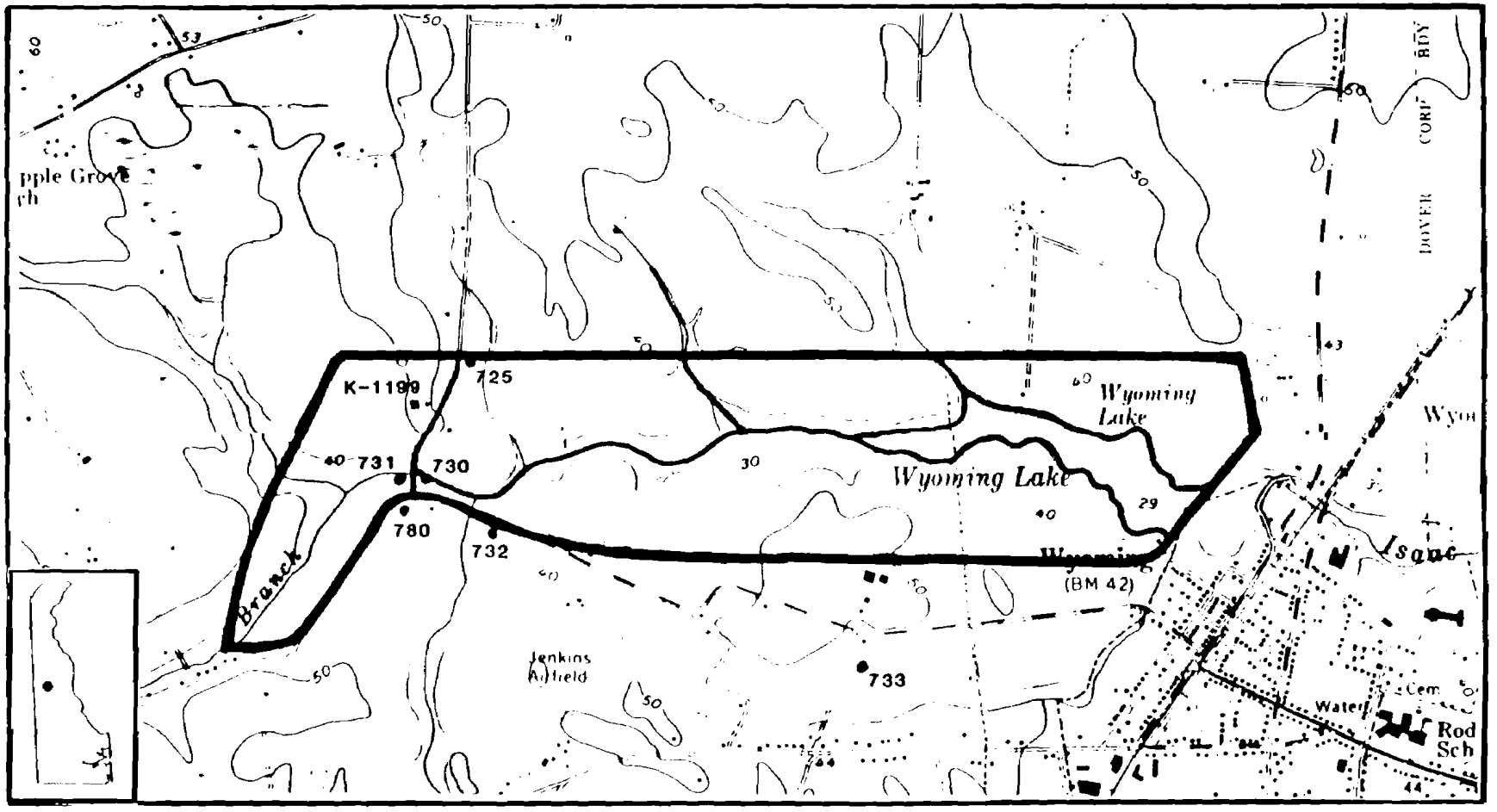


FIGURE 52

Historic Archaeological Resources Data – Wyoming Lake Study Area 9



features, disturbance in each case is minimal. Three of the sites in particular (729, K-1198, K-3749) offer the potential for the recovery of material cultural data from undisturbed contexts. Site K-3749, a ca. 1860 agricultural complex and currently the headquarters of Fifer Orchards, is particularly significant. This standing structure represents the "peach boom" in Kent County and the importance of orchard crops in Delaware history.

Also given a high overall cultural resource potential are three mill sites along the Isaac and Almhouse Branches. Two of the locations (730, 731) have been identified as pre-1802 grist mill complexes. The archaeological potential for both sites is high. Heavy vegetation at the time of this survey, however, prevented the location of specific features.

The third mill dates from the early twentieth century and is associated with a range of outbuildings, including two agricultural implement sheds, a corncrib, and a pumphouse. This range of outbuildings is assumed to reflect intensive and varied use of the site. One archaeological feature, a well, was also located. The potential for other undisturbed features is high.

The third and final set of sites given a high overall cultural resource potential are three mid-nineteenth century agricultural tenant residences. Two of the locations include standing structures (K-3746, K-3747). The archaeological potential for each of these three tenant sites is excellent, although no features were located by the survey. Given the number of large agricultural complexes and mills in this area, data recovered from these agricultural tenant residences would provide significant material culture information.

Derby Pond Study Area

Table 27 provides a summary description of the historic sites. Figure 53 shows the location of the standing structure sites in the area and Figure 54 shows the location of the historical archaeological sites. The Derby Pond Study Area is located in North Murderkill Hundred (Figure 3). Preservation is excellent in this area, although four standing structures have been removed since inclusion in the BAHP files.

As with all of the other areas surveyed, most of the historic sites in the Derby Pond area are primarily associated with large-scale agricultural production. One series of sites given a high overall cultural resource potential in this area are four mid to late nineteenth century agricultural complexes, only one of which (K-3567) is a standing structure. Each of these sites is intact and has associated archaeological features. Another 10 agricultural complex locations within the area are relatively undisturbed and offer a high potential for intact archaeological features.

Two early twentieth century dwelling complexes were also given a high overall cultural potential. One site, K-3794, dates

TABLE 22

BERDY POND STUDY AREA HISTORIC SITES - SUMMARY DESCRIPTION

SITE NUMBER	NUMBERED	USGS QUAD	DATE	FUNCTIONS	DISTURB.	ARCHAEO. POTENT.	HISTORIC SIGNIF.	OUTBUILDINGS	ARCHAEO.	TOTAL RESOURCE POTENT.
[illegible]	NORTH MURDERKILL	WYOMING	[illegible]	AGR	[illegible]	[illegible]	M	0	0	M
[illegible]	NORTH MURDERKILL	WYOMING	[illegible]	AGR	[illegible]	M	M	[illegible]	[illegible]	M
[illegible]	NORTH MURDERKILL	WYOMING	[illegible]	AGR	[illegible]	M	M	0	0	M
[illegible]	NORTH MURDERKILL	WYOMING	[illegible]	AGR	UN	M	M	L1	0	M
[illegible]	NORTH MURDERKILL	WYOMING	[illegible]	DOMEST	UN,SH	M	M	L1	0	M
[illegible]	NORTH MURDERKILL	WYOMING	[illegible]	AGR	UN	M	M	J1,C1	W1	M
[illegible]	NORTH MURDERKILL	WYOMING	[illegible]	AGR	UN,DEB	M	M	C?	0	M
[illegible]	NORTH MURDERKILL	WYOMING	[illegible]	AGR	UN,MD	M	L	0	0	L
[illegible]	NORTH MURDERKILL	WYOMING	[illegible]	RECTA	UN,DEB	M	M	0	0	M
[illegible]	NORTH MURDERKILL	WYOMING	[illegible]	AGR	UN	M	M	L1	0	M
[illegible]	NORTH MURDERKILL	WYOMING	1930	AGR	UN	M	L	0	0	M
[illegible]	NORTH MURDERKILL	WYOMING	[illegible]	AGR	UN	M	M	L1,M1,J1,B3,W6	0	M
[illegible]	NORTH MURDERKILL	WYOMING	[illegible]	AGR	UN	M	M	T1,B2,L2,U1	0	M
[illegible]	NORTH MURDERKILL	WYOMING	[illegible]	AGR	UN	M	M	L1	W1	M
[illegible]	NORTH MURDERKILL	WYOMING	[illegible]	AGR	UN,DEB	M	M	0	0	M
[illegible]	NORTH MURDERKILL	WYOMING	[illegible]	AGR	[illegible]	M	M	0	0	M
[illegible]	NORTH MURDERKILL	WYOMING	[illegible]	AGR	UN	M	M	M1	0	M
[illegible]	NORTH MURDERKILL	WYOMING	[illegible]	AGR	UN	M	M	J1,L2	W?	M
[illegible]	NORTH MURDERKILL	WYOMING	[illegible]	AGR	UN	M	M	N1	0	M
[illegible]	NORTH MURDERKILL	WYOMING	[illegible]	AGR	[illegible]	M	M	B3	0	M
[illegible]	NORTH MURDERKILL	WYOMING	[illegible]	AGR	[illegible]	?	M	N1	0	M
[illegible]	NORTH MURDERKILL	WYOMING	1930	AGR	UN,MD	M	M	N1	W1	M
[illegible]	NORTH MURDERKILL	WYOMING	1930	AGR	UN,I	M	I	N1,L1	0	M
[illegible]	NORTH MURDERKILL	WYOMING	[illegible]	AGR	[illegible]	M	M	0	0	M

FIGURE 53

Standing Structures from BAHP Files – Derby Pond Study Area 7

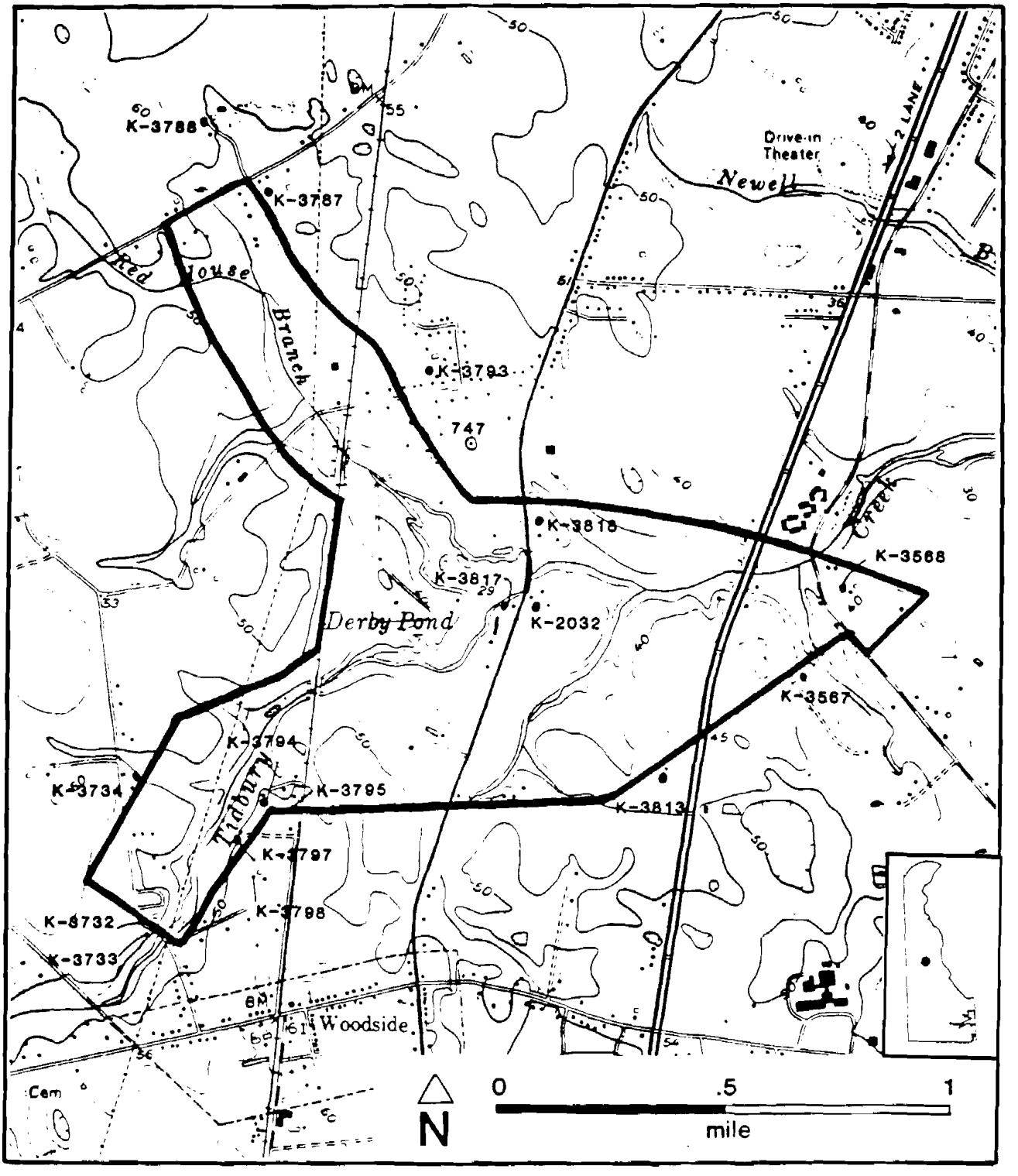
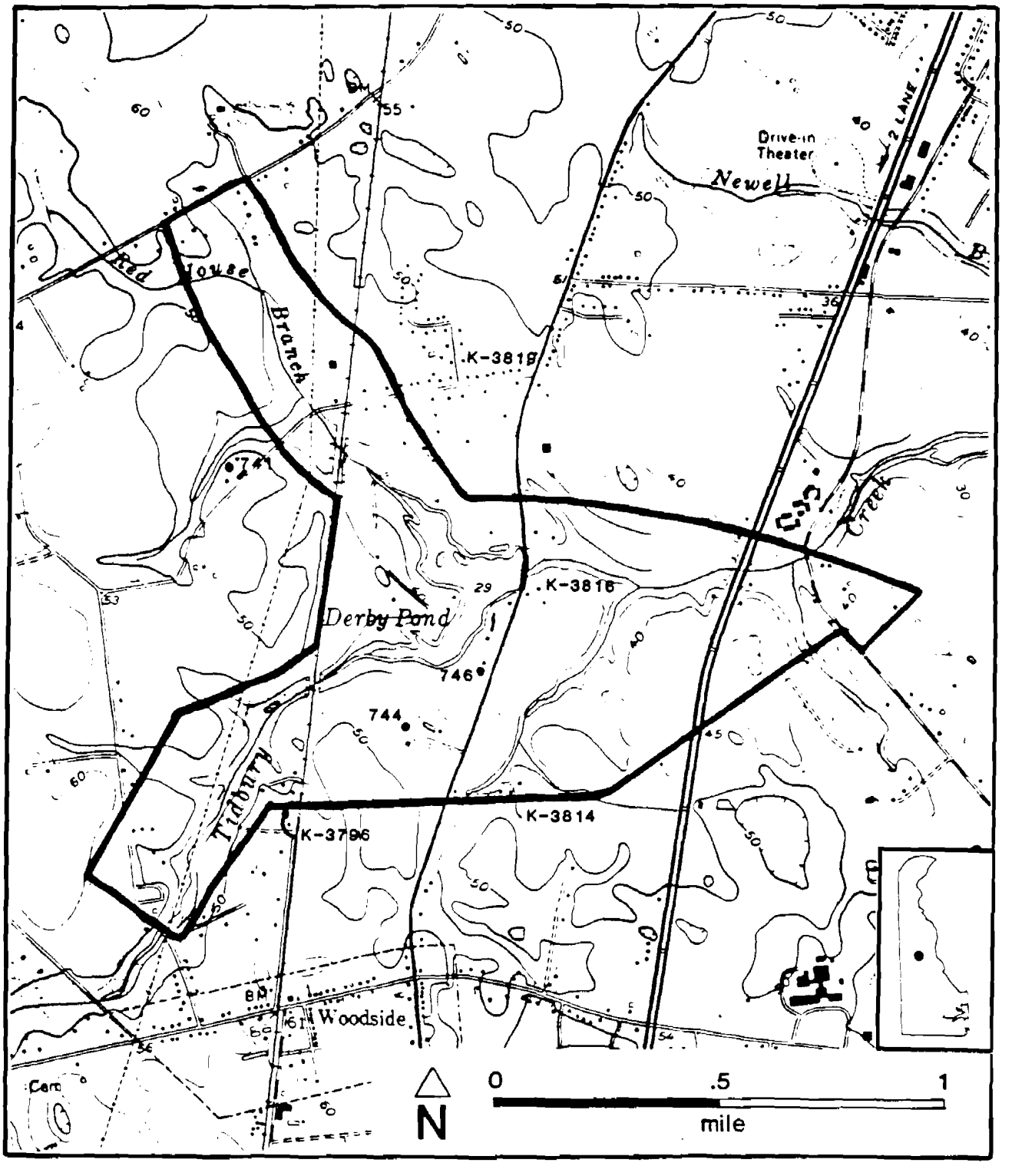


FIGURE 54

Historic Archaeological Resources Data - Derby Pond Study Area 7



from ca. 1900 and is both undisturbed and associated with visible archaeological features. The other standing structure, K-3817, dates from 1935 and has associated archaeological features. Both of these dwelling complexes, as well as other such early twentieth century sites, reflect the influences of urbanization and industrialization since 1900, due particulary to changes in transportation.

One additional standing structure in the Derby Pond area deserves particular attention. This site, K-3733, is a late nineteenth century railroad station and represents an aspect of Delaware history not well represented in any of the study areas. Although the structure itself has deteriorated, the potential for archaeological features in good context is high.

Double Run/Spring Creek Study Area

Table 28 provides a summary description of the historical archaeological and standing structure sites in the Double Run/Spring Creek area. Figure 55 shows the location of the standing structures in the area and Figure 56 shows the location of the historic archaeological sites. The Double Run/Spring Creek Study Area is located in South Murderkill Hundred (Figure 3). In general, the sites in this area are unevenly preserved. All of the standing structures study are intact. Historic archaeological sites, however, are less well preserved. This area is intensively cultivated and a number of pre-1868 agricultural complex archaeological sites have been disturbed.

Three standing structures in this area (K-1689, K-2746, K-2742) are of particular interest. Sites K-1689 and K-2746 have been identified as agricultural complexes and are undisturbed and associated with visible features. Site K-2742 is a remarkably well preserved agricultural tenant house, one of the few such tenant houses still standing in the Route 13 Corridor (see Plate 21). Another four such undisturbed structures have been located although no features were observed. As previously noted, historic archaeological sites of agricultural sites are less well preserved with only one site (776) not plowed or mechanically disturbed.

Two mill sites (K-759, K-760) have been identified in this area along Double Run. Both sites appear in Beers' 1868 atlas and were confirmed by pedestrian survey. The potential for intact archaeological features at both sites is excellent. Pedestrian survey of K-759 showed the remains of 6-8 large posts driven into the streambed, portions of two large brown salt-glazed stoneware crocks, and a 5-7 feet high and approximately 325 feet long earth embankment along Double Run.

Two previously unrecorded historic sites were located during this survey. Both sites (K-6091, K-6086) are small, mid to late nineteenth century family cemeteries. The families represented in both cemeteries are identified by Beers and relatives may still live in the area.

TABLE 28

DOUBLE RUN/SPRING CREEK STUDY AREA HISTORIC SITES - SUMMARY DESCRIPTION

SITE NUMBER	NUMBER	USGS QUAD	DATE	FUNCTIONS	OTHER	ARCHAEO. CONTENT	RESTORTN STATUS	OUTBUILDINGS	ARCHAEO. FEATURES	TOTAL RESOURCE CONTENT
[illegible]	SOUTH MURDERKILL	FREDERICA	[illegible]	[illegible]	[illegible]	H	H	0	D1	H
[illegible]	SOUTH MURDERKILL	FREDERICA	[illegible]	[illegible]	[illegible]	H	H	L2	D1	H
[illegible]	SOUTH MURDERKILL	FREDERICA	[illegible]	[illegible]	[illegible]	M	H	0	0	M
[illegible]	SOUTH MURDERKILL	FREDERICA	[illegible]	[illegible]	[illegible]	H	H	0	0	M
[illegible]	SOUTH MURDERKILL	FREDERICA	[illegible]	[illegible]	[illegible]	M	H	0	0	M
[illegible]	SOUTH MURDERKILL	FREDERICA	[illegible]	[illegible]	[illegible]	H	H	J1,M1	0	H
[illegible]	SOUTH MURDERKILL	FREDERICA	[illegible]	[illegible]	[illegible]	M	H	L1	0	H
[illegible]	SOUTH MURDERKILL	FREDERICA	[illegible]	[illegible]	[illegible]	L	L	0	0	L
[illegible]	SOUTH MURDERKILL	FREDERICA	[illegible]	[illegible]	[illegible]	M	H	0	0	M
[illegible]	SOUTH MURDERKILL	FREDERICA	[illegible]	[illegible]	[illegible]	H	H	0	0	M
[illegible]	SOUTH MURDERKILL	FREDERICA	[illegible]	[illegible]	[illegible]	H	H	0	0	M
[illegible]	SOUTH MURDERKILL	FREDERICA	[illegible]	[illegible]	[illegible]	H	H	A2	W2,OD1	H
[illegible]	SOUTH MURDERKILL	FREDERICA	[illegible]	[illegible]	[illegible]	H	H	H1,A3,J1,L4,C1	OD1,W2,EN1	H
[illegible]	SOUTH MURDERKILL	FREDERICA	[illegible]	[illegible]	[illegible]	H	H	J1,E1,A2	0	H
[illegible]	SOUTH MURDERKILL	FREDERICA	[illegible]	[illegible]	[illegible]	M	H	L1	0	H
[illegible]	SOUTH MURDERKILL	FREDERICA	[illegible]	[illegible]	[illegible]	H	H	N1	W1	H
[illegible]	SOUTH MURDERKILL	FREDERICA	[illegible]	[illegible]	[illegible]	H	H	C2,H1,M1,I1,A1,PR1	0	H
[illegible]	SOUTH MURDERKILL	FREDERICA	[illegible]	[illegible]	[illegible]	H	H	L2,F1	W1	H
[illegible]	SOUTH MURDERKILL	FREDERICA	[illegible]	[illegible]	[illegible]	H	H	I1,J1,A1,PR1,H1	0	H
[illegible]	SOUTH MURDERKILL	FREDERICA	[illegible]	[illegible]	[illegible]	M	H	A2	0	M
[illegible]	SOUTH MURDERKILL	FREDERICA	[illegible]	[illegible]	[illegible]	H	H	N1	0	H
[illegible]	SOUTH MURDERKILL	FREDERICA	[illegible]	[illegible]	[illegible]	H	H	L3,A1	W1	H
[illegible]	SOUTH MURDERKILL	FREDERICA	[illegible]	[illegible]	[illegible]	M	H	0	0	H
[illegible]	SOUTH MURDERKILL	FREDERICA	[illegible]	[illegible]	[illegible]	H	H	A3,L1,C1,PR1,O1	OD1	H
[illegible]	SOUTH MURDERKILL	FREDERICA	[illegible]	[illegible]	[illegible]	H	H	0	EM1	H
[illegible]	SOUTH MURDERKILL	FREDERICA	[illegible]	[illegible]	[illegible]	M	H	0	O1	M
[illegible]	SOUTH MURDERKILL	FREDERICA	[illegible]	[illegible]	[illegible]	H	H	0	EM1	H

FIGURE 55

Standing Structures from BAHP Files – Double Run/Spring Creek Study Area 4

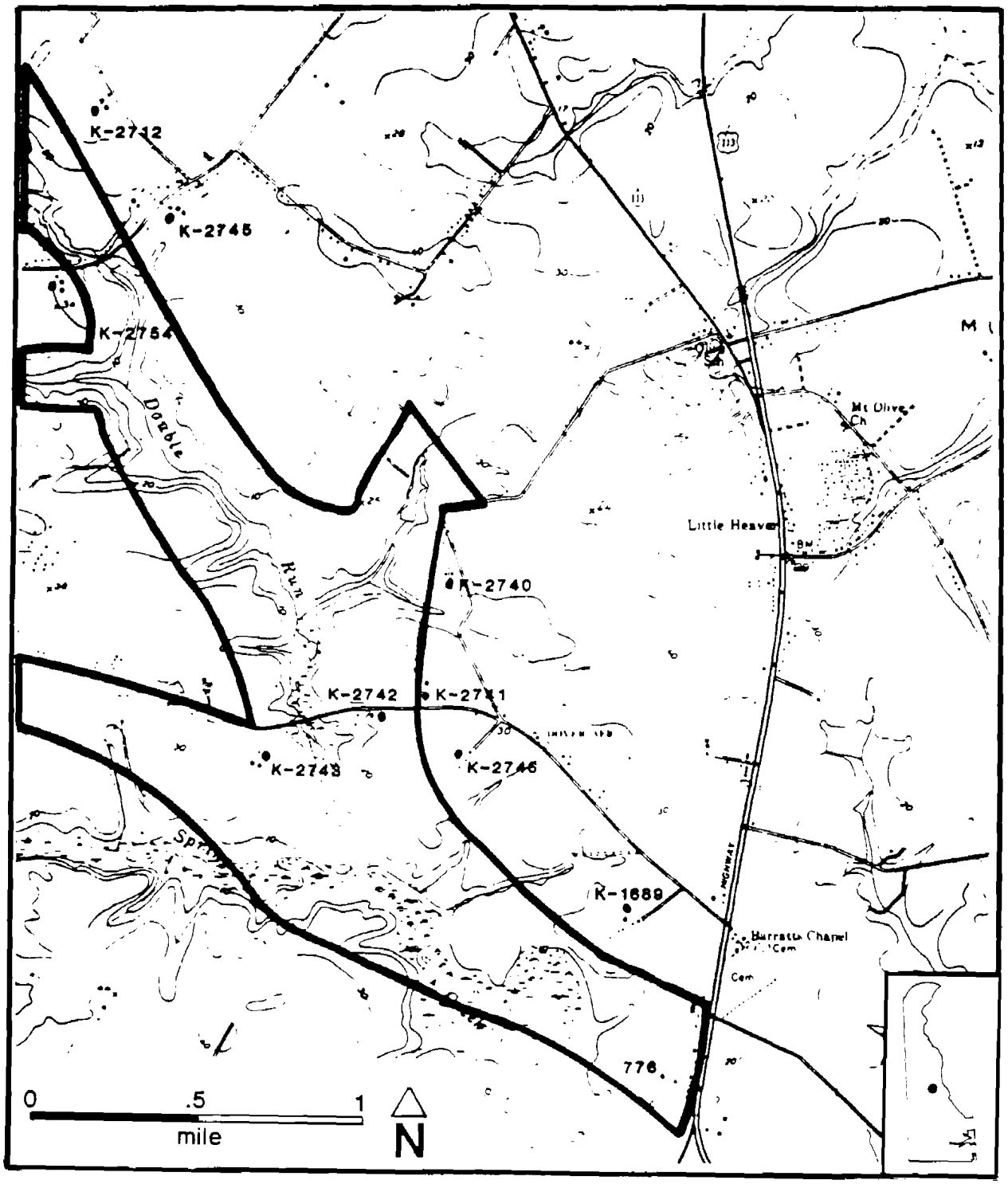


FIGURE 56

Historic Archaeological Resources Data - Double Run/Spring Creek Study Area 4

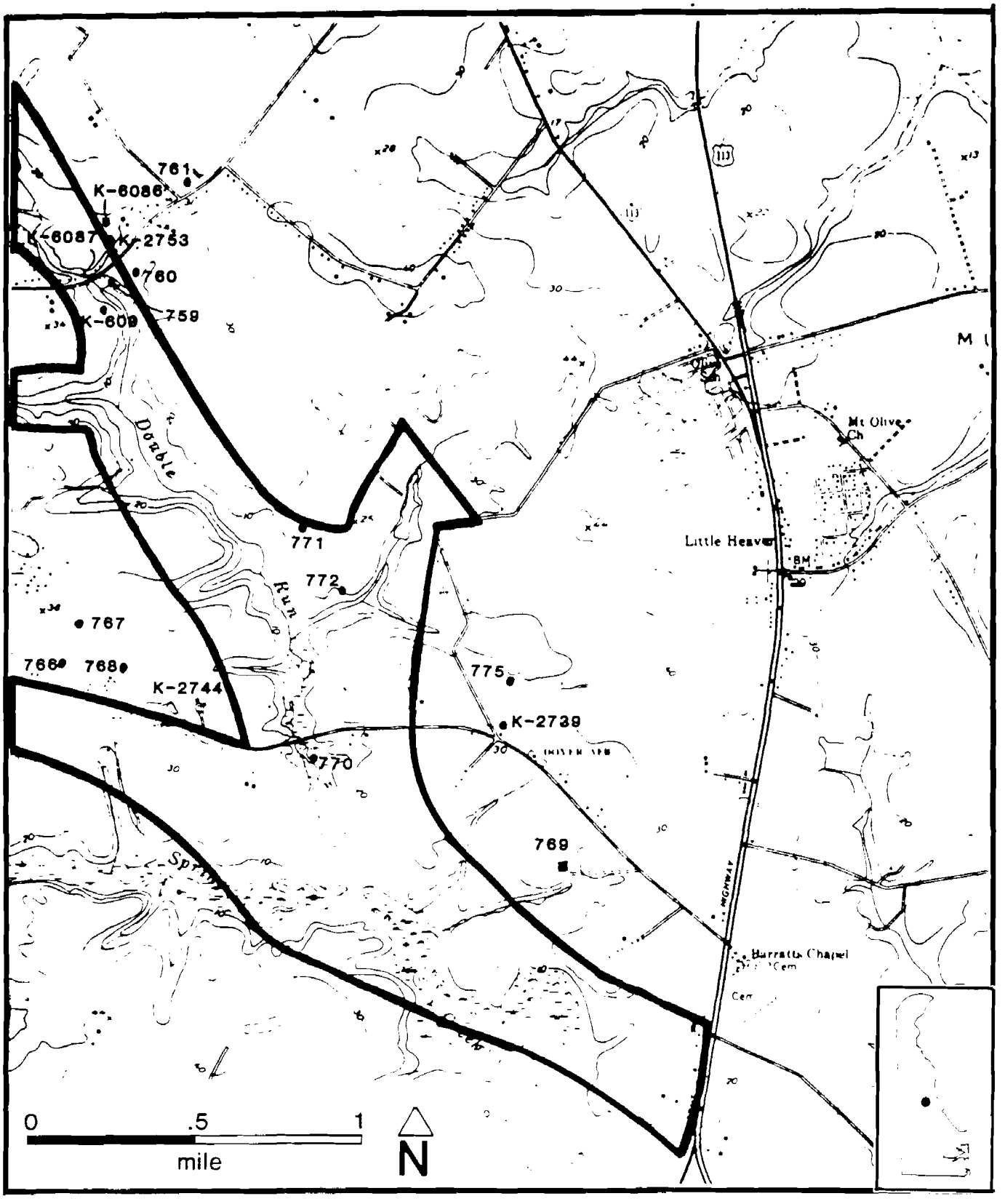


PLATE 21

Standing Structure K-2742, Looking South from Kent 371